



# City of Seattle

## Department of Planning and Development

Diane M. Sugimura, Director

### CITY OF SEATTLE ANALYSIS AND DECISION OF THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND DEVELOPMENT

#### INTRODUCTION

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This document includes the Director's analysis and decision for Application 3012586, a Master Use Permit (MUP) to allow the construction of a second draw bridge parallel to and east of the existing Montlake Bridge south of the University of Washington. This is one of nine MUPs related to the Seattle portion of the SR 520 project.

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## ANALYSIS AND DECISION

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### 1 Application 3012586 – Montlake Bridge Portion

**Application Number:** 3012586

**Applicant Name:** Kerry Pihlstrom for Washington State Department of Transportation

**Addresses of Proposal:** 2950 B Montlake Boulevard E

#### 1.1 SUMMARY OF PROPOSED ACTION

SR 520 Replacement Project - Montlake Bridge Portion. Shoreline Substantial Development Permit to allow construction of a second draw bridge, 3 lanes wide, east of and parallel to the existing Montlake Bridge in an environmentally critical area. Work includes 6,929 cu. yds. of grading and new approaches on the north and south side of the Montlake Cut.

Environmental documents have been prepared by Washington State Department of Transportation (WSDOT) and the Federal Highway Administration (FHWA). The Draft Environmental Impact Statement for the SR 520 Bridge Replacement and HOV Program was released in August 2006. A Supplemental Draft Environmental Impact Statement prepared by FHWA and WSDOT was released in January 2010. The Final EIS was issued on June 17, 2011.

The 2006 Draft Environmental Impact Statement (EIS) analyzed proposed corridor construction from the I-5 interchange in Seattle to just west of I-405 in Bellevue. The Supplemental Draft EIS in 2010 evaluated the effects of a No Build Alternative and three 6-lane design options for the SR 520 corridor from I-5 to Medina. A Preferred Alternative, similar to Option A, was identified in April 2011 following consideration of comments on the SDEIS.

The Final Environmental Impact Statement and Final Section 4(f) and 6(f) Evaluations analyzed a No Build Alternative along with a Preferred Alternative and the three SDEIS design options for the I-5 to Medina corridor. The Preferred Alternative and the design options would replace existing bridge structures, add continuous HOV lanes, and include landscaped lids over SR 520 to reconnect neighborhoods that are now separated by the highway.

The aging floating bridge is vulnerable to failure in a severe windstorm, and the fixed bridges along the corridor do not meet current seismic standards and could collapse in an earthquake. In addition, due to growth in jobs and housing, the corridor currently carries nearly twice as many vehicles as it was originally designed for, resulting in extended congestion and impaired mobility. The uninterrupted movement of people and goods across SR 520 and the floating bridge is essential to the region's economic vitality and quality of life.

The following approvals are required:

**Shoreline Substantial Development Permit** to allow development in the Conservancy Management, Conservancy Navigation and Urban Residential (CM, CN, and UR) Shoreline Environments.

**SEPA – To approve, condition or deny pursuant to Seattle’s SEPA policies. Chapter 25.05.660, Seattle Municipal Code.**

## **1.1.1 Background Information**

### **1.1.1.1 SR520 Bridge Replacement and HOV Program**

The SR 520, I-5 to Medina Project would widen the SR 520 corridor to six lanes from I-5 in Seattle to Evergreen Point Road in Medina and would restripe and reconfigure the lane channelization in the corridor from Evergreen Point Road to 92nd Avenue Northeast in Yarrow Point. It would replace the vulnerable Evergreen Point Bridge, including the floating bridge and west and east approaches, and the Portage Bay Bridge with new structures.

Because of the difference in types of new structures, and the difference in shoreline environments in which those structures would be located, the Washington Department of Transportation (WSDOT) has applied to the City of Seattle for four separate Shoreline Substantial Development Permits (SSDP).

This decision pertains only to the proposed second drawbridge to be located adjacent to and east of the existing drawbridge across the Montlake Cut. See Figure 1 Project Location.



**Figure 1 Project Location**

### 1.1.1.2 Site and Vicinity Description

The second Montlake Bridge would occur within the Conservancy Management (CM), Conservancy Navigation (CN), and Urban Residential (UR) shoreline environments. The bridge would be adjacent to and east of the existing Montlake Bridge. Like the existing bridge, the second bridge would be a drawbridge and is designed to have essentially the same dimensions as the existing bridge. See Figure 2 Shoreline Environments.



**Figure 2 Shoreline Environments**



On the south side of the Montlake Cut, the immediate area is primarily single family residential, with the Seattle Yacht Club located farther to the west. On the north side of the Montlake Cut, the University of Washington's medical facilities are located on the west side of Montlake Boulevard East, and Husky Stadium and other University of Washington sports facilities are located on the east.

### 1.1.2 Proposal Description

The proposal is to add a new two-leaf bascule bridge (drawbridge) over the Montlake Cut, parallel to the existing Montlake Bridge. A two-leaf bascule bridge is a movable bridge with counterweights on each landward end that balance the leaves (or spans) as they are raised. Hydraulic or gear mechanical systems are used to operate the bridge.

- The new bascule bridge would be constructed parallel to and just east of the existing Montlake Bridge. When open, the bridge provides unlimited vertical clearance for boat traffic.
- The second bascule bridge is designed to have essentially the same dimensions as the existing bridge. The bottom of the arched bridge would be approximately 35 feet above the water near the piers and approximately 46 feet above the water at mid-span. The overall height of the structure would be approximately 59 feet above the water when closed, and 135 feet above the water when open.
- The proposed bascule bridge deck would be approximately 54 feet wide and have an over-water span of approximately 150 feet.
- Total over-water cover from the new bridge would be approximately 0.2 acre.
- The proposed deck design of the new bridge would be solid (the surface has not been finalized). The existing bridge has a grated deck.
- Each of the two bridges would operate with three lanes; the existing bridge would serve southbound traffic, and the new bridge would serve northbound traffic.
- In addition to the three travel lanes, the new bridge would also include a new 18-foot wide shared use bicycle/pedestrian pathway.

#### **1.1.2.1 Shoreline Environments**

- The bridge would extend across the Montlake Cut, within the CM, CN and UR shoreline environments.
- The staging on barges would occur within the CN Environment.
- Potential staging at the University of Washington's E-12 parking lot would occur within the CM Environment.

#### **1.1.2.2 Adjacent Roadway Improvements**

The street improvements would extend approximately 150 feet from the bridge limits in both directions within the shoreline environment.

- The improvements to Montlake Boulevard Northeast would consist of three northbound through lanes and an 18-foot bicycle/pedestrian pathway.
- These improvements would extend from the Montlake Interchange with SR 520 on the south to the intersection with Northeast Pacific Street on the north.

#### **1.1.2.3 Construction Activities**

The construction activities would be staged from the shoreline, except for the temporary use of barges positioned in the Montlake Cut to install the bridge leaves.

- No in-water construction activities are proposed.



- Upland construction activities would occur outside of and east of the existing Montlake Boulevard roadway and would consist of constructing upland pier supports to for the foundation for the bridge superstructure.
- Upland pier construction would be isolated from the water by the construction of an upland temporary containment barrier installed above the ordinary high water mark (OHWM).

#### **1.1.2.4 Ship Canal Waterside Trail**

In addition to the proposed bridge and street improvements, construction would affect the Ship Canal Waterside Trail. The 1,200-foot-long trail is located east and west of Montlake Boulevard along the south side of the Montlake Cut. The trail connects to the Arboretum Waterfront Trail in East Montlake Park and West Montlake Park on Portage Bay. The trail can be accessed from Montlake Boulevard as well as from East Montlake Park at East Shelby Street.

- During construction of the bascule bridge, the trail would be closed to access from Montlake Boulevard East.
- Portions of the trail outside of the construction limits would be accessible from either West Montlake Park or East Montlake Park. However, pedestrians would not be able to pass through the construction area at Montlake Boulevard East, which would disrupt the connectivity of the trail during the 2.5-year construction period.
- Potential detours for the trail have been examined by WSDOT, but WSDOT found that no detours would be possible due to the construction on Montlake Boulevard East.
- The existing pedestrian access to the trail from Montlake Boulevard East would be relocated approximately 40 feet to the east of its existing location after completion of the project.

#### **1.1.2.5 Impacts to Environmentally Critical Areas**

WSDOT found that the project would result in temporary and permanent impacts to environmentally critical areas (Final EIS, Chapter 5 and Montlake Bridge Project Environmental Critical Areas Technical Memorandum).

- Some clearing of shoreline buffer vegetation would be required.
- Effects to aquatic habitat would be from shading and artificial lighting associated with the bridge.
- No work is proposed below the OHWM, and therefore no disturbance of benthic habitat would occur.
- Wetlands do not occur within the construction limits of the bridge.

### **1.1.3 WSDOT Proposed Aquatic Mitigation Measures**

#### **1.1.3.1 Fish and Wildlife Habitat Conservation Area Mitigation**

While WSDOT has included measures to avoid or minimize impacts to the FWHCA and its buffer, some project elements and activities will require compensatory mitigation for unavoidable impacts to aquatic habitat.

Policy SMC 25.09.200(B)(3)(b) pertains to over-water structures and states that the “Mitigation is provided for all impacts to the ecological functions of fish habitat on the parcel resulting from any permitted increase in or alteration of existing over-water coverage.” Many of the potential impacts to fish and other aquatic species will be indirect. For example, partial shading impacts from the new bridge structures could alter juvenile salmon migration patterns or timing, or influence the distribution of salmonid predators in the study area. These potential impacts could reduce the number of juvenile salmon completing successful outmigration to marine waters. Impacts on individual fish or populations of fish, resulting from habitat alterations are generally mitigated by increasing the quality and quantity of habitat for the species of interest.

#### ***1.1.3.1.1 Shoreline Habitat Mitigation***

Because WSDOT cannot mitigate for permanent shoreline impacts on-site, WSDOT sought off-site mitigation. During the off-site selection process, WSDOT has identified the Elliott Reach of the Cedar River as sufficient to provide the required mitigation area for the project. Mitigation at these sites can address the same functions and values that would be affected by the project. The Cedar River site provides a total of 1.14 acres of mitigation credit from floodplain and riparian restoration. The West Approach project (WSDOT 2011d) will use a portion of this credit; however, a surplus of 1.12 acres will be left to apply to offset impacts from the Montlake Bascule Bridge project. Of this total available mitigation area, 0.18 acre will be assigned to offset permanent shoreline habitat (aquatic) impacts (Table 3 in the Montlake Bridge Environmental Critical Area Technical Memorandum). The proposed mitigation sites will be monitored for 5 to 10 years, depending on the mitigation actions (WSDOT 2010). Revegetated temporary impact areas will be monitored for 5 years. Monitoring contingency, and site management plans are provided in this mitigation report and will be used to adaptively manage the mitigation site.

The Cedar River/Elliott Bridge site is located on the main stem of the Cedar River in unincorporated King County, Washington. The project area is between the 154th Place SE Bridge and the City of Renton Ron Regis Park. The project area includes the properties acquired by King County as part of its floodplain property acquisition plan.

Mitigation actions at this site will include the following:

- Restoration of riparian vegetation within the floodplain with wetland and upland planting zones.
- Removal of the levee and riprap from the right bank.
- Excavation of the floodplain behind the levee, reducing the overall elevation by 3 to 5 feet, to provide opportunities to create wetland and off channel habitat.
- Cutting a blind channel into the floodplain, with the entrance near the old 149th Street bridge abutment.
- Placement of LWD structures to provide fish cover and pool habitat, and to protect the north bank of the channel.

#### ***1.1.3.1.2 Shoreline Buffer Mitigation***

Opportunities for on-site shoreline buffer enhancement within the Montlake Cut area are limited due to existing infrastructure and other constraints within the project right-of-way. Only 0.04 acre of shoreline enhancement is possible on-site within the right-of-way, substantially less than the 0.15 acre of buffer mitigation needed to offset permanent buffer impacts onsite. Therefore, in

order to meet the shoreline buffer mitigation requirements, WSDOT is proposing combination of on-site and off-site mitigation. That is, mitigation for 0.04 acre of impacts will be mitigated for on-site by the enhancement of 0.04 acre of shoreline buffer (Table 4 of ECAR).

Mitigation for remaining shoreline buffer impacts will occur at the West Approach study area. The shoreline buffer improvements at the WSDOT Peninsula site will result in a surplus of 1.50 acres of mitigation credit after the application of 1.38 acres and 2.55 acres of mitigation credit for West Approach Bridge project's and the Portage Bay Bridge project's permanent shoreline buffer impacts respectively (WSDOT 2011d). According to SMC 25.09.200, mitigation for vegetation removal, placement of impervious surface or other loss of habitat within the shoreline buffer is allowed to occur off-site. Because the mitigation area for the remainder of the permanent impacts within the Montlake study area will occur at a distance greater than ¼ mile from the impact location, the prescribed mitigation ratio is 3:1. Therefore mitigation for the 0.11 acre of remaining impact will be offset by enhancement of 0.33 acre of shoreline buffer vegetation at the West Approach study area. A total of 9.04 acres of shoreline buffer creation or enhancement will occur within the West Approach area. Of this total available mitigation area, 0.33 acre will be assigned to offset the Montlake area shoreline buffer (permanent fill and shading) impacts.

### **1.1.3.2 Best Management Practices**

WSDOT has proposed to use the following Best Management Practices (BMPs)<sup>1</sup> during all construction activities to eliminate or minimize potential environmental effects.

*Temporary Stormwater Management Strategy* - The temporary stormwater management strategy is to aid in reducing the risk of potential pollutants being discharged to a watercourse that may cause or contribute to the exceedances of water quality standards during construction activities. The plans that will be implemented include:

- Stormwater Pollution Prevention Plan
- Temporary Erosion and Sediment Control Plan
- Spill Prevention, Control, and Countermeasures Plan
- Concrete Containment and Disposal Plan
- Water Quality Sampling, Recording and Reporting Procedures

*Land Based Construction BMPs* – Land based BMPs are intended to minimize or eliminate the discharge of potential pollutants to a watercourse or waters of the state. These procedures would be implemented for construction materials and wastes (solids and liquids), soil or dredging materials, or any other materials that may cause or contribute to exceedance of water quality standards. The BMPs include:

- Clear definition of construction limits
- Minimize vegetation and soil disturbance to the extent possible
- Avoid or reduce adverse impacts on critical areas including shoreline buffers
- Protect designated sensitive areas, including the shoreline, with silt fencing

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<sup>1</sup> The information included in this decision is a summary of the BMPs listed in greater detail in Attachment 2 of the MUP Application package.

- Control of stormwater discharges from construction sites
- Ensure that NPDES permit requirements are met

*Construction BMPs to Control Dust and Limit Impacts on Air Quality* – These BMPs are intended to reduce the risk of exceeding local air quality standards during construction. The methods include:

- Wet down fill material and dust on site
- Ensure adequate freeboard to prevent soil particles from blowing away during transport
- Remove dirt, dust and debris from the roadway on a regular basis
- Minimize potential erosion from areas of disturbed soil by stabilizing and/or revegetating cleared areas in accordance with the TESC plan
- Wet down concrete structures during construction activities

*Over-Water Work – BMPs* – Over-water work BMPs would be implemented for the proper use, storage, and disposal of materials and equipment on barges, boats, temporary construction pads (work bridges), or similar locations. Their purpose is to minimize or eliminate the discharge of potential pollutants to a watercourse or waters of the state. These procedures would be implemented for construction materials and wastes (solid and liquid), soil or dredging materials, or any other materials that may cause or contribute to exceedance of water quality standards. The plans or methods include:

- Construction Stormwater Pollution Prevention Planning
- Watertight Curbs, Bull Rails, or Toe Boards
- Oil Containment Boom
- Tie Downs to secure all materials
- Absorbent Materials to be placed under all vehicles and equipment on docks, barges, and other over-water structures
- Equipment Maintenance and Inspection
- Cover and Catchment Measures
- Construction Water Treatment Systems
- Spill Containment Kits and Containment Products
- Alternative Lubricants and Fuels
- Barges and Floats – used to stockpile materials, store construction equipment, transport demolition debris, and store water containment systems and water storage tanks

*In-Water Work – BMPs* – BMPs for in-water work are intended to both protect water quality and to protect resident or migrating aquatic species. The proposed BMPs include:

- Underwater Containment System/Temporary Cofferdam
- Sediment Testing
- Noise Attenuation
- Timing Restrictions for in-water work

#### **1.1.4 Project Construction Duration**

Construction is planned to begin in the spring of 2016 and to be completed in the fall of 2018, a duration of approximately 2.5 years. Additional time may be required for mobilization and project closeout, including cleanup, dismantling of staging areas, and restoration where required by permit conditions.

### **1.1.5 Public Comments**

The comment period for this project ended on September 16, 2011. DPD held a public meeting and open house at the Museum of History and Industry (MOHAI) on the evening of October 5, 2011. Approximately 120 public comments were received either at the meeting or in writing to DPD. Overall, most of the comments pertained to the entire 520 bridge project, with only a few of these comments specifically focused on the Montlake Bridge portion of the project. Comments on the overall project included numerous concerns about both the short and long term impacts of a larger bridge in the project area. These concerns were primarily focused on the environmental and recreational impacts of the bridge construction in sensitive wetland and aquatic/nearshore habitats. A large number of comments expressed concern about the length of construction, timing of the permits, stormwater control, increased traffic and road impacts during construction, the larger size and greater impacts of the proposed design for the replaced bridge, and potential for substantial impacts during construction to local vegetation, mature trees, water/sediment quality, wildlife and recreational opportunities. A clear theme present in many of the comments was that WSDOT (the applicant) should include or substitute more environmental and recreational mitigation in the immediate area of project impacts rather than further away (off-site) or outside the City. Concerns were also expressed about inadequate or incorrect information in the project application for the project.

## **1.2 ESSENTIAL PUBLIC FACILITY**

### **1.2.1 Background**

SR 520 is designated as a highway of statewide significance (HSS) pursuant to RCW 47.06.140 and RCW 47.05.022 (Resolution 660, dated January 21, 2004). Pursuant to RCW 36.70A.200, the proposed SR 520, I-5 to Medina: Bridge Replacement and HOV Project (Project) is defined by the State of Washington as an EPF due to its HSS designation. RCW 47.01.260 grants WSDOT plenary authority over state highways and provides that WSDOT shall exercise all the powers and perform all the duties necessary for the siting, design, and construction of state highways. Additionally, RCW 36.70.200(5) and WAC 365-196-550(3)(a) provides that no local development regulation may preclude the siting of EPFs. WAC 365-196-550(1)(b) further states that “Essential public facilities include the expansion of existing essential public facilities or support activities and facilities necessary for an essential public facility.”

### **1.2.2 The City’s EPF Criteria**

SMC 23.80.004 (adopted 2004, revised 2006) identifies the following criteria to be considered in the review of an essential public facility:

*SMC 23.80.004 (A)(1): Interjurisdictional Analysis. A review to determine the extent to which an interjurisdictional approach may be appropriate, including consideration of possible alternative sites for the facility in other jurisdictions and an analysis of the*

*extent to which the proposed facility is of a county-wide, regional or state-wide nature, and whether uniformity among jurisdictions should be considered.*

Opened in 1963, the existing SR 520 is a facility of state-wide nature. The floating span of the bridge now carries approximately 115,000 vehicles per day across the lake, providing east-west access for commuters, freight, transit, and general-purpose traffic. Existing state legislation directs the State Transportation Commission to give high priority to correcting deficiencies on highways of statewide significance.

The aging floating bridge is vulnerable to failure in a severe windstorm, and the fixed bridges along the corridor do not meet current seismic standards and are vulnerable to collapse in an earthquake. In addition, due to growth in jobs and housing, the corridor currently carries nearly twice as many vehicles as it was originally designed for, resulting in extended congestion and impaired mobility. The uninterrupted movement of people and goods across SR 520 and the floating bridge is essential to the region's economic vitality and quality of life.

WSDOT initiated interjurisdictional coordination in 1998 with a 47-member stakeholder group that included three City of Seattle representatives to explore ways of improving mobility and access around Lake Washington. The interjurisdictional group considered and evaluated alternatives, including potential travel modes, project corridors, and crossing locations. The result, titled the Trans-Lake Washington Study, included recommendations to WSDOT on how to improve the SR 520 corridor. WSDOT used the study results to initiate a scoping study of alternatives to be considered in the environmental impact statement.

As part of its interjurisdictional approach, WSDOT engaged all agencies with jurisdiction in a Regulatory Agency Coordination process (RACp). The RACp included smaller technical working groups that met to discuss more specific project issues such as impacts to wetlands and parks, compliance with the Endangered Species Act compliance, and mitigation concepts. WSDOT has worked with agencies and stakeholders through legislative workgroups created by Engrossed Substitute Senate Bills 6099 and 6392, and Engrossed Substitute House Bill 2211. Additionally, WSDOT initiated technical coordination and executive management briefings with City of Seattle as needed or requested.

The interjurisdictional coordination, of which Seattle is a member, informed the Trans-Lake Washington Study, and provided input on alternatives for WSDOT's three subsequent environmental documents, including the draft environmental impact statement (2006), supplemental draft environmental impact statement (2010) and final environmental impact statement (2011). All technical design options for crossing Lake Washington were considered as part of the alternatives analysis, and evaluated within the context of state, regional, and local plans. A floating bridge, sited within the existing corridor, remained the lowest-cost and lowest-impact solution.

*SMC 23.80.004 (A)(2): Financial Analysis. A review to determine if the financial impacts upon the City of Seattle can be reduced or avoided by intergovernmental agreement.*

Financial impacts to the City of Seattle would occur from the loss of property tax revenue from properties acquired by WSDOT for additional right-of-way, and loss of park land and open space.

Construction of the project would require WSDOT to permanently acquire additional right-of-way in the SR 520 corridor, including 6 residential structures. This would result in taxable property being removed from the City of Seattle's tax base, and a decrease in the City's overall property tax revenue. By applying the 2008 tax levy rate, it is estimated that the loss of property tax revenue for the City of Seattle would be approximately \$8,600. This amounts to less than 0.01 percent of the City's 2008 budgeted property tax revenue, and would not substantially affect the city's overall tax revenue.

Approximately 8.6 acres of park or open space would be acquired by WSDOT for project right-of-way. The park and open space that would be acquired is not subject to property tax. This area would be purchased by WSDOT at fair market value, in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. The monetary compensation for these acquisitions would mitigate for the potential financial impact to the City of Seattle. WSDOT will mitigate for the project's conversion of land that is protected by Section 6(f) of the Land and Water Conservation Fund Act by providing the City of Seattle with funding for the purchase and/or development of a replacement site.

Representatives of Seattle Parks and Recreation participated in the SR 520 Parks Technical Working Group. Through the work of the group and ongoing coordination with stakeholders, the total acquisition required by the Preferred Alternative would be less than the amount of acquisition required by previously evaluated design options. Therefore, the financial impact to the City of Seattle would be less than the other design options evaluated, and would be mitigated through monetary compensation and replacement of park property.

In addition, WSDOT and Seattle's Department of Planning and Development have reached a separate financial Memorandum of Agreement (MOA) to address Project fees. It will be necessary to amend this MOA in order to reimburse costs connected with staff time for future work associated with the mitigating conditions of City permits. Staff time will include activities such as reviews of plans, documents, inspections and meetings. WSDOT has also offered to reimburse Seattle Parks and Recreation for their review and coordination efforts associated with this project. WSDOT has also committed to funding \$200,000 for implementation of the Seattle Department of Transportation's traffic calming efforts within the Arboretum, as described in the 2010 ESSB 6392 Arboretum Mitigation Plan.

*SMC 23.80.004 (A)(3): Special Purpose Districts. When the public facility is being proposed by a special purpose district, the City should consider the facility in the context of the district's overall plan and the extent to which the plan and facility are consistent with the Comprehensive Plan.*

The Washington State Department of Transportation is not a Special Purpose District

*SMC 23.80.004 (A)(4): Measures to Facilitate Siting. The factors that make a particular facility difficult to site should be considered when a facility is proposed, and measures should be taken to facilitate siting of the facility in light of those factors (such as the*

*availability of land, access to transportation, compatibility with neighboring uses, and the impact on the physical environment).*

The SR 520 corridor is an important link between Seattle and the Eastside. While developing and refining the design, WSDOT, in partnership with affected jurisdictions, agencies, tribes, and the public, considered key constraints that ultimately guided siting of the facility. Measures to minimize the footprint and locate the project within the existing corridor while maintaining traffic during construction were prioritized. These measures included narrowing the roadway design to minimize right of way acquisitions and impacts on neighborhoods, parks and the environment, and minimizing structure impacts on the Arboretum by making alignment and structural engineering adjustments. The project alignment was also further modified to avoid and minimize right of way effects away from Section 4f resources, which include historic and park properties.

Although wider than the existing facility, the proposed project would be similar to the existing configuration and would be primarily located on land that already exists as part of the transportation facility. The new roadway alignment for SR 520 through the Seattle area falls predominately within the existing WSDOT right-of-way in order to avoid impacts to existing structures and to minimize property acquisitions and displacements. Due to the density of the built and urban environment, a more efficient, straight-line alternative was not selected because it was not compatible with existing and neighboring uses throughout the corridor.

In comparison to other designs that were considered, the proposed project would result in the least overall harm to public parks, significant historic properties, and environmental resources such as wetlands and fish habitat. Adverse effects resulting from the project could not be entirely eliminated because of the density of development in the project vicinity, the narrow existing highway right-of-way, and community fragmentation caused by the original highway bisecting several parklands and neighborhoods.

Chapter 9 of the Final EIS discusses the constraints that led to the final siting and alignment of the Preferred Alternative.

*SMC 23.80.004 (B): If the decisionmaker determines that attaching conditions to the permit approval will facilitate project siting in light of the considerations identified above, the decisionmaker may establish conditions for the project for that purpose.*

As previously mentioned and further described in Chapter 9 of the Final EIS, WSDOT has conducted an extensive siting process in an effort to reduce environmental harm from the proposed replacement facility. The siting process began with the Trans-Lake Washington Study and has extended through the final design refinements included as part of the Preferred Alternative, and analyzed in the Final EIS. The proposed project includes extensive mitigation measures in order to site the facility; no additional conditions are needed pursuant to the criteria of this section.

City development regulations that are preclusive to the siting of SR520 and therefore necessitate a waiver from the identified standards are document in this report. Table 1-1 summarizes the waivers that are required as a result of preclusive development standards.



**Table 1-1**  
**3011843 – Montlake Bridge Identified EPF Waivers**

<b>Shoreline Development Standards</b>
<b>23.60.152.Q.</b> <i>Submerged public right-of-way shall be subject to the following standards:</i>
<i>1. All structures shall be floating except as permitted in subsection Q2 below;</i>
<i>3. The maximum height of structures shall be fifteen feet (15')</i>
<i>4. Structures shall not occupy more than thirty-five (35) percent of the right-of-way and shall not occupy more than forty (40) percent of the width of the right-of-way.</i>

### **1.3 ENVIRONMENTALLY CRITICAL AREAS**

The Environmentally Critical Areas Ordinance was adopted to promote safe, stable, and compatible development that avoids adverse environmental impacts and potential harm on the parcel and to adjacent properties.

The proposed activities include development over water (i.e., shoreline habitat) within the environmentally critical area. The activities are allowed within the Shoreline regulations, as analyzed below, and therefore are consistent with allowed development in the ECA shoreline habitat and buffer per SMC 25.09.200, as long as sufficient habitat mitigation is provided, which is discussed below.

#### **1.3.1 SMC 25.09.200 Development Standards for Fish and Wildlife Habitat Conservation Areas**

The WSDOT proposed mitigation for temporary and permanent shoreline and shoreline buffer habitat is summarized in Subsection 1.1.3.1 Fish and Wildlife Habitat Conservation Area Mitigation above, and described more fully in the Final Aquatic Mitigation Plan, SR 520, I-5 to Medina: Bridge Replacement and HOV Project and the Montlake Bridge Project Environmental Critical Areas Technical Memorandum.

##### Permanent Shoreline Habitat Impacts

Because WSDOT cannot mitigate for permanent shoreline impacts on-site, WSDOT sought off-site mitigation. During the off-site selection process, WSDOT has identified the Elliott Reach of the Cedar River as sufficient to provide the required mitigation area for the project. Mitigation at these sites can address the same functions and values that would be affected by the project. The Cedar River site provides a total of 1.14 acres of mitigation credit from floodplain and riparian restoration. The West Approach project (WSDOT 2011d) will use a portion of this credit; however, a surplus of 1.12 acres will be left to apply to offset impacts from the Montlake Bascule Bridge project. Of this total available mitigation area, 0.18 acre will be assigned to offset permanent shoreline habitat (aquatic) impacts (Table 3 in the Montlake Bridge Environmental Critical Area Technical Memorandum). The proposed mitigation sites will be monitored for 5 to 10 years, depending on the mitigation actions (WSDOT 2010). Revegetated temporary impact areas will be monitored for 5 years. Monitoring contingency, and site management plans are provided in this mitigation report and will be used to adaptively manage the mitigation site.

The Cedar River/Elliott Bridge site is located on the main stem of the Cedar River in unincorporated King County, Washington. The project area is between the 154th Place SE

Bridge and the City of Renton Ron Regis Park. The project area includes the properties acquired by King County as part of its floodplain property acquisition plan.

Mitigation actions at this site will include the following:

- Restoration of riparian vegetation within the floodplain with wetland and upland planting zones.
- Removal of the levee and riprap from the right bank.
- Excavation of the floodplain behind the levee, reducing the overall elevation by 3 to 5 feet, to provide opportunities to create wetland and off channel habitat.
- Cutting a blind channel into the floodplain, with the entrance near the old 149th Street bridge abutment.
- Placement of LWD structures to provide fish cover and pool habitat, and to protect the north bank of the channel.

#### Shoreline Buffer Mitigation

Opportunities for on-site shoreline buffer enhancement within the Montlake Cut area are limited due to existing infrastructure and other constraints within the project right-of-way. Only 0.04 acre of shoreline enhancement is possible on-site within the right-of-way, substantially less than the 0.15 acre of buffer mitigation needed to offset permanent buffer impacts onsite. Therefore, in order to meet the shoreline buffer mitigation requirements, WSDOT is proposing combination of on-site and off-site mitigation. That is, mitigation for 0.04 acre of impacts will be mitigated for on-site by the enhancement of 0.04 acre of shoreline buffer (Table 4 of ECAR).

Mitigation for remaining shoreline buffer impacts will occur at the West Approach study area. The shoreline buffer improvements at the WSDOT Peninsula site will result in a surplus of 1.50 acres of mitigation credit after the application of 1.38 acres and 2.55 acres of mitigation credit for West Approach Bridge project's and the Portage Bay Bridge project's permanent shoreline buffer impacts respectively (WSDOT 2011d). According to SMC 25.09.200, mitigation for vegetation removal, placement of impervious surface or other loss of habitat within the shoreline buffer is allowed to occur off-site. Because the mitigation area for the remainder of the permanent impacts within the Montlake study area will occur at a distance greater than ¼ mile from the impact location, the prescribed mitigation ratio is 3:1. Therefore mitigation for the 0.11 acre of remaining impact will be offset by enhancement of 0.33 acre of shoreline buffer vegetation at the West Approach study area. A total of 9.04 acres of shoreline buffer creation or enhancement will occur within the West Approach area. Of this total available mitigation area, 0.33 acre will be assigned to offset the Montlake area shoreline buffer (permanent fill and shading) impacts.

## **1.4 ANALYSIS - SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT**

The proposal is located within the following Shoreline Environments as designated by the Seattle Shoreline Master Program (SSMP): Conservancy Management (CM), Conservancy Navigation (CN) and Urban Residential (UR). The Shoreline Master Program, Chapter 23.60 of the Seattle Municipal Code, regulates use and development in the City's shoreline districts to implement the

policy and provisions of the Shoreline Management Act of 1971 and the Shoreline Goals and Policies.

The SSMP requires that a shoreline permit be obtained prior to the undertaking of any substantial development within a shoreline environment. SMC Section 23.60.030 includes criteria for evaluating a shoreline permit. A substantial development permit shall be issued only when the development proposed is consistent with:

- A. The policies and procedures of Chapter 90.58 RCW;
- B. The regulations of this Chapter; and
- C. The provisions of Chapter 173-27 WAC.

Conditions may be attached to the approval of a permit as necessary to assure consistency of the proposed development with the Seattle Shoreline Master Program and the Shoreline Management Act.

#### **1.4.1 The Policies and Procedures of Chapter 90.58 RCW**

The State of Washington Shoreline policies (RCW Chapter 90.58) provide for the control of pollution and prevention of damage to the natural environment, and for the protection of the resources and ecology of the shoreline over the long term. It is the policy of the state to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses. The Shoreline Management Act of 1971 provides definitions and concepts, and gives primary responsibility for initiating and administering the regulatory program of the Act to local governments. The Department of Ecology is to primarily act in a supportive and review capacity, with primary emphasis on insuring compliance with the policy and provisions of the Act. As a result of this Act, the City of Seattle adopted a local shoreline master program, codified in the Seattle Municipal Code at Chapter 23.60 that also incorporates the provisions of Chapter 173.27 WAC. Development on the shorelines of the State is not to be undertaken unless it is consistent with the policies and provisions of the Act, and with the local master program. The Act sets out procedures, such as public notice and appeal requirements, and penalties for violating its provisions.

The City of Seattle Shoreline policies incorporate these goals by reference and include area objectives pursuant to these goals. These policies contemplate protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting public rights of navigation and corollary incidental rights. Permitted uses in the shorelines shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water.

As discussed below, the City's Shoreline policies encourage public access and discourage disrupting the shoreline environment. This proposal is consistent with the policies and procedures of the RCW Chapter 90.58.

#### **1.4.2 The Regulations of Chapter 23.60**

The regulations of SSMP Section 23.60.064 require that the proposed use: 1) conform to all applicable development standards of both the shoreline environment and underlying zoning;

2) be permitted in the shoreline environment and the underlying zoning district 3) satisfy the criteria of shoreline variance, conditional use, and/or special use permits as may be required and 4) SMC 23.60.014 C. for standards applicable to environmentally critical areas as provided in Seattle Municipal Code Chapter 25.09, Regulations for Environmentally Critical Areas, shall apply in the Shoreline District. If there are any conflicts between the Seattle Shoreline Master Program and Seattle Municipal Code Chapter 25.09, the most restrictive requirements shall apply.

On the north side of the bridge site, the underlying zoning is Lowrise 2, with a Major Institution Overlay of MIO-37 for the University of Washington. On the south side of the bridge site, the zoning is Single Family 5000, with Single Family 7200 located to the east. The underlying zoning allows for primarily residential uses, however SMC 23.51A.002.F Public Facilities in Single Family Zones and SMC 23.51A.004.F Public Facilities in Multifamily Zones, allow for the location of essential public facilities subject to the review criteria in SMC 23.80.

#### **1.4.2.1 SMP 23.60.004 - Shoreline Policies**

Goals and policies governing approval of development in shoreline districts are set out in the Land Use Element of the Seattle Comprehensive Plan.

##### ***1.4.2.1.1 Environmentally Critical Areas (LUG 36)***

Seattle's Comprehensive Plan Environmentally Critical Areas encourage protection of the ecological functions and values of wetlands, and fish and wildlife habitat conservation areas (LUG 36). There are no wetlands within the construction area of the proposed second Montlake Bridge.

As described above in Section 1.1.2.5 Impact to Environmentally Critical Areas, WSDOT found that the project would result in only minor temporary and permanent impacts to environmentally critical areas (Final EIS, Chapter 5, and July 2011 City of Seattle Master Use Permit Application Package). These impacts would be caused by clearing of shoreline buffer vegetation, and effects to aquatic habitat from shading and artificial lighting associated with the bridge.

WSDOT has proposed off-site mitigation at the Cedar River/Elliott Bridge Site in unincorporated King County to compensate for temporary and permanent aquatic impacts. This mitigation site would also provide compensatory mitigation for the proposed construction of other elements of the SR 520 corridor improvements that are subject to independent application processes.

Mitigation activities at the Cedar River/Elliott Bridge Site would include: restoration of riparian vegetation within the floodplain with wetland and upland planting zones; removal of the levee and riprap from the right bank; excavation of the floodplain behind the levee, reducing the overall elevation by 3 to 5 feet, to provide opportunities to create wetland and off channel habitat; cutting a blind channel into the floodplain, with the entrance near the old 149th Street bridge abutment; and placement of LWD structures to provide fish cover and pool habitat, and to protect the north bank of the channel.

#### ***1.4.2.1.2 Shoreline Goals LUG 43, LUG 48, and LUG 49 – Protection of Shoreline and Aquatic Environment***

The Shoreline Goals and Policies are located in Section C-4 of the Land Use Element. There are three goals specific to the protection of the shoreline and aquatic environment: LUG 43, “Protect those areas of shoreline that are geologically dangerous or fragile, or biologically fragile.”; LUG 48, “Preserve, protect and restore areas such as those necessary for the support of wild and aquatic life or those identified as having geological or biological significance.”; and LUG 49, “Insure that all future uses will preserve and protect environmental systems, including wild and aquatic life.”

As described above in Section 1.1.2.5 Impacts to Environmentally Critical Areas, while WSDOT has included measures to avoid or minimize impacts to the FWHCA, compensatory mitigation is required for unavoidable impacts to aquatic habitat or shoreline buffer habitat.

Many of the potential impacts to fish and other aquatic species will be indirect. For example, partial shading impacts from the new bridge structures could alter juvenile salmon migration patterns or timing, or influence the distribution of salmonid predators in the study area.

Off-site mitigation is proposed at a location outside of the City of Seattle to compensate for temporary and permanent aquatic impacts: Cedar River/Elliott Bridge Site in unincorporated King County. This mitigation site would also provide compensatory mitigation for the proposed construction of other elements of the SR 520 corridor improvements that are subject to independent application processes.

#### ***1.4.2.1.3 Shoreline Goals LUG 44 – Public Access, LUG 45 – View Preservation, LUG 46 – Transportation Network***

Goal LUG 44 provides for “the optimum amount of public access – both physical and visual – to the shorelines of Seattle. LUG 45 describes that views of the shoreline and water from upland areas shall be preserved and enhanced where appropriate. LUG 46 promotes development of “a transportation network that supports and enhances use of and access to the shorelines.”

The proposed bike/pedestrian pathway along the second Montlake Bridge, and new connections to new off-bridge bike/pedestrian paths will allow for greater opportunities than currently exist for the public to access and enjoy the shoreline environment along Lake Washington. The new Montlake Bridge will be part of the redevelopment of the SR 520 transportation network, and will support and enhance use of and access to the shoreline of Lake Washington, Portage Bay and Union Bay.

#### ***1.4.2.1.4 Shoreline Policy LU 270 – Heights in Shoreline Environment***

There is one land use policy, LU 270 that is specific to heights in the Shoreline Environment: “The 35-foot height limit of the Shoreline Management Act shall be the standard for maximum height in the Seattle Shoreline District. Exceptions in the development standards of a shoreline environment may be made consistent with the Act and with the underlying zoning where: a. greater height will not obstruct views of a substantial number of residences and the public interest will be served; and b. greater height is necessary for bridges or the operational needs of water dependent or water-related uses or manufacturing uses.”

As described above in the Proposal description, the new bascule bridge would be constructed parallel to and just east of the existing Montlake Bridge. When open, the bridge provides unlimited vertical clearance for boat traffic. The second bascule bridge is designed to have essentially the same dimensions as the existing bridge. The bottom of the arched bridge would be approximately 35 feet above the water near the piers and approximately 46 feet above the water at mid-span. The overall height of the structure would be approximately 59 feet above the water when closed, and 135 feet above the water when open. The proposed bascule bridge deck would be approximately 54 feet wide and have an over-water span of approximately 150 feet.

In the area where the second Montlake Bridge is proposed, the Montlake Cut is approximately 55 – 60 feet deep as measured from the water level up to the ground surface on either side of the cut. The height of the proposed bridge is necessary for the operational needs of ships and other boats that pass through the Montlake Cut. Because the bridge would be placed on the same level as the existing bridge and surrounding properties, views from a substantial number of residents would not be obstructed. The bridge would serve the public interest by providing additional roadway capacity in a north-south direction.

#### **1.4.2.2 Effective Date of Shoreline Permit**

Seattle's SMP allows the Director to adopt different time limits for the life of a shoreline substantial development permit. SMC 23.60.074.A states that : *“ Upon finding of good cause, based on the requirements and circumstances of the project proposed and consistent with the policy and provisions of WAC 173-27 and this chapter, the Director may adopt different time limits from those set forth ...this section ... as part of the decision on a shoreline substantial development permit... "Good cause, based on the requirements and circumstances of the project," means that the time limits established are reasonably related to the time actually necessary to perform the development on the ground and complete the project that is being permitted, and/or are necessary for the protection of shoreline resources. ”*

The applicant has requested an extension to the standard time limits applicable to shoreline substantial development permits to a total of eight (8) years from the date of permit issuance. As construction of the second Montlake Bridge is not anticipated to begin until 2016, WSDOT has requested that the permit specifically allow construction of the bridge to commence later than the standard 2 years after permit issuance. **The time limits for the permit, per SMC 23.60.074A and B will be determined prior to issuance and be based on the based on the time needed to complete the construction of the project (about 2.5 years).**

#### **1.4.2.3 Shoreline Uses**

The proposed shoreline development is located in the Conservancy Management (CM), Conservancy Navigation (CN) and Urban Residential (UR) Shoreline Environments.

The proposed uses include:

- Bridge – Construction of a bascule bridge, including all components of the bridge, such as approaches, embankments, retaining walls, lighting, roadway on the bridge, and utilities on the bridge. The bicycle/pedestrian pathway is also treated as a component of the bridge where it is upon the bridge and associated structures.

- Street - The improvements to Montlake Boulevard Northeast would consist of three northbound through lanes and an 18-foot bicycle/pedestrian pathway.
- Stormwater Facilities Off-bridge – One stormwater facility (Facility U) would be constructed on the north side of the Montlake Cut within the CM shoreline environment.
- Stormwater Lines Off-bridge – a new stormwater line is proposed to convey stormwater to a bioswale (Facility U) and discharge to an existing 12-inch stormwater outfall. No alterations to the existing outfall would occur.

Temporary construction staging would occur on barges would occur within the CN Environment. Potential staging at the University of Washington’s E-12 parking lot would occur within the CM Environment. This use would not be considered a principal or accessory use.

A summary of the uses proposed in each of the three shoreline environments is provided on the following table:

**Table 1-2**  
**Summary of Uses Proposed in Shoreline Environment**

<b>Proposed Use</b>	<b>CM Environment</b>	<b>CN Environment</b>	<b>UR Environment</b>
Bridge (including the Bike/Pedestrian Pathway on the Bridge)	SU	SU	Permitted Outright
Street	SU		Permitted Outright
Stormwater Facilities	Permitted Outright		
Stormwater Lines	Permitted Outright		

All of the proposed uses are allowed either outright or as a special use.

- Bridges are allowed as a special use (SU) in the CM Environment (SMC 23.60.424) and CN Environment (SMC 23.60.242) subject to the special use criteria of Section 23.60.032, and allowed outright on waterfront lots in the UR Environment (SMC 23.60.540).
- Streets are allowed as a special use (SU) in the CM Environment (SMC 23.60.424) subject to the special use criteria of Section 23.60.032.
- Stormwater facilities are permitted outright in the CM environment as a “utility service whose operations require a shoreline location” (SMC 23.60.420.A.2).
- Stormwater lines are permitted outright in the CM Environment as “utility lines” (SMC 23.60.420.A.1).

An analysis of whether the proposed uses that are allowed as “special uses” are provided in the following Subsection 1.4.2.3.1.

#### ***1.4.2.3.1 Analysis – Shoreline Special Use***

As summarized in Table 1-2 and described above, the following uses are subject to the special use criteria of Section 23.50.032:

- Bridges are allowed as a special use (SU) in the CM Environment (SMC 23.60.424) and CN Environment (SMC 23.60.242) subject to the special use criteria of Section 23.60.032.
- Streets are allowed as a special use (SU) in the CM Environment (SMC 23.60.424) subject to the special use criteria of Section 23.60.032.

SMC 23.60.032 provides the following:

*Uses which are identified as requiring special use approval in a particular environment may be approved, approved with conditions or denied by the Director. The Director may approve or conditionally approve a special use only if the applicant can demonstrate all of the following:*

- A. That the proposed use will be consistent with the policies of RCW 90.58.020 and the Shoreline Policies;*

See Section 1.4.1. The Director has determined that the proposed uses are consistent with the policies of RCW 90.58.020.

See Section 1.4.2.1 for an analysis of compliance with Shoreline Policies. The proposed uses (bridge and street) are in compliance with the Shoreline Policies.

Shoreline Policy LU 270 – Heights in Shoreline Environment, is specific to heights in the Shoreline Environment: *“The 35-foot height limit of the Shoreline Management Act shall be the standard for maximum height in the Seattle Shoreline District. Exceptions in the development standards of a shoreline environment may be made consistent with the Act and with the underlying zoning where: a. a greater height will not obstruct views of a substantial number of residences and the public interest will be served; and b. greater height is necessary for bridges or the operational needs of water dependent or water-related uses or manufacturing uses.”*

As described above in the Proposal description, the new bascule bridge would be constructed parallel to and just east of the existing Montlake Bridge. When open, the bridge provides unlimited vertical clearance for boat traffic. The second bascule bridge is designed to have essentially the same dimensions as the existing bridge. The bottom of the arched bridge would be approximately 35 feet above the water near the piers and approximately 46 feet above the water at mid-span. The overall height of the structure would be approximately 59 feet above the water when closed, and 135 feet above the water when open. The proposed bascule bridge deck would be approximately 54 feet wide and have an over-water span of approximately 150 feet.

In the area where the second Montlake Bridge is proposed, the Montlake Cut is approximately 55 – 60 feet deep as measured from the water level up to the ground surface on either side of the cut. The height of the proposed bridge is necessary for the operational needs of ships and other



boats that pass through the Montlake Cut. Because the bridge would be placed on the same level as the existing bridge and surrounding properties, views from a substantial number of residents would not be obstructed. The bridge would serve the public interest by providing additional roadway capacity in a north-south direction.

*B. That the proposed use will not interfere with the normal public use of public shorelines;*

The proposed uses (bridge and street) will not interfere with the normal public use of public shorelines. The proposed bike/pedestrian pathway along the bridge, and new connections to new off-bridge bike/pedestrian paths will allow for greater opportunities than currently exist for the public to access and enjoy the shoreline environment along Lake Washington.

*C. That the proposed use of the site and design of the project will be compatible with other permitted uses within the area;*

The proposed bridge structure would be located adjacent to the existing Montlake Bridge, and designed to have essentially the same dimensions and appearance as the existing bridge.

*D. That the proposed use will cause no unreasonably adverse effects to the shoreline environment in which it is to be located; and*

See analysis above in Subsection 1.4.2.1.2 - Shoreline Goals LUG 43, LUG 48, and LUG 49 – Protection of Shoreline and Aquatic Environment. There will be temporary and permanent impacts to aquatic habitat from the construction of the new facilities. WSDOT has proposed compensatory mitigation to replace the lost functions and values.

*E. That the public interest suffers no substantial detrimental effect.*

The proposed bridge and associated bicycle/pedestrian pathway will serve the transportation needs of commuters, travelers, and commerce in the city, as well as the larger region. As a public transportation corridor, the proposal will not result in a substantial detrimental effect on the public interest.

#### ***1.4.2.3.2 Decision – Shoreline Special Use***

The Director has determined that the proposed uses of bridge, street, bicycle/pedestrian paths, and utility lines meet the Special Use Criteria of SMC 23.60.032 and **are approved as follows:**

- The bridge structures as proposed are approved as a special use (SU) in the CM Environment (SMC 23.60.424) and CN Environment (SMC 23.60.242).
- The street improvements as proposed are approved as a special use (SU) in the CM Environment (SMC 23.60.424).

#### **1.4.2.4 Shoreline Development Standards**

The proposed shoreline development is located in the Conservancy Management (CM), Conservancy Navigation (CN) and Urban Residential (UR) Shoreline Environments. Pursuant to the Seattle Shoreline Master Plan, the proposed action is subject to the:

1. general development standards (SMC 23.60.150, 23.60.152, 23.60.160, and 23.60.162);
2. development standards applicable to specific uses (SMC 23.60.179 – 23.60.210);
3. development standards for uses in the CM Environment (SMC 23.60.450, SMC 23.60.452, SMC 23.60.454, SMC 23.60.456, SMC 23.60.458, and SMC 23.60.460);
4. development standards for uses in the CN Environment (SMC 23.60.270); and
5. development standards for uses in the UR Environment (SMC 23.60.570, SMC 23.80.572, SMC 23.60.574, SMC 23.60.576, and SMC 23.60.578)

##### ***1.4.2.4.1 SMC 23.60.150 -23.60.162 - Development Standards***

#### **SMC 23.60.150 Applicable Development Standards.**

All uses and developments in the Shoreline District shall be subject to the general development standards applicable to all environments, to the development standards for the specific environment in which the use or development is located, and to any development standards associated with the particular use or development.

See analysis below for each shoreline environment.

#### **SMC 23.60.152 - General Development**

General standards for all uses and development in all shoreline environments are established in SMC Section 23.60.152. Generally, these standards require that all shoreline activity be designed, constructed, and operated in an environmentally sound manner consistent with the Shoreline Master Program and with best management practices for the specific use or activity, in order to have minimal impact on the shoreline environment. The following general development standards are relevant to the proposed project:

- A. The location, design, construction and management of all shoreline developments and uses shall protect the quality and quantity of surface and ground water on and adjacent to the lot and shall adhere to the guidelines, policies, standards and regulations of applicable water quality management programs and regulatory agencies. Best management practices such as paving and berming of drum storage areas, fugitive dust controls and other good housekeeping measures to prevent contamination of land or water shall be required.*

As described in Chapter 5 of the Final EIS, possible negative impacts to surface and ground water quality could result from construction of this project due to earthwork, concrete work, paving, stockpiling, erosion of disturbed soils or soil stockpiles by stormwater runoff, fugitive dust from demolition, equipment leaks or spills, material transport, storm drainage and/or combined sewer utility work, and dewatering. If not properly controlled through use of Best Management Practices, these project actions could result in construction-related

pollutants that could increase turbidity and pH in portions of Union Bay and Lake Washington as well as affect other water quality parameters, such as the amount of available oxygen in the water.

Construction of the project would require the development and implementation of temporary erosion and sediment control (TESC) and spill prevention, control, and countermeasures (SPCC) plans (WSDOT 2008a). A TESC plan would detail the risk of erosion in different parts of the study area and would specify best management practices (BMPs) to be installed prior to construction activities and periodic maintenance and inspection procedures during construction. It would include environmental standards based on state regulations, such as turbidity and total suspended solids (TSS) levels in stormwater discharged from construction staging and work areas. A SPCC plan would also be prepared to prevent, control, and identify countermeasures for potential spills of hazardous materials during construction, as required by WSDOT Standard Specification 1-07.15(1) (WSDOT 2008d).

The project will employ numerous Best Management Practices and mitigation measures to protect groundwater and surface water quality, which are summarized above in the Proposal Description (see page 5), briefly discussed below, and discussed in substantial detail in the FEIS in Chapter 6 Construction Effects of the FEIS, and in the discipline reports and plans attached as addendums to the FEIS including the Geology and Soils Discipline Report; Water Resources Discipline Report; Hazardous Materials Discipline Report, and the Conceptual Aquatic Mitigation Plan.

1. Construction Stormwater Pollution Prevention Plan. This plan will describe overall BMPs, including location, size, maintenance requirements, and monitoring; specify methods for handling dewatering water, including storage, treatment, and discharge or disposal; discuss fugitive dust control, including surface protection and wetting techniques; outline flow control, including methods for routing off-site stormwater around the construction area and for controlling on-site stormwater discharges; address detention requirements and protocols to meet requirements and maintain existing conveyance system capacity; describe temporary water quality treatment for on-site stormwater runoff and/or dewatering water, including methods, location, and treatment goals; specify storm drain protection, maintenance, and monitoring; provide a list of Certified Erosion and Sediment Control Leads who would monitor and manage implementation and maintenance of BMPs; and outline water quality monitoring requirements, including location, frequency, and reporting. This plan would serve as the overall stormwater mitigation plan and would include each of the plans discussed below as appendices:
2. Temporary Erosion and Sediment Control Plan: This plan would outline the design and construction specifications for BMPs to be used to identify, reduce, eliminate, or prevent sediment and erosion problems.
3. Spill Prevention, Control, and Countermeasures Plan: This plan would outline requirements for spill prevention, inspection protocols, equipment, material containment measures, and spill response procedures.

4. Concrete Containment and Disposal Plan: This plan would outline the management, containment, and disposal of concrete and discuss BMPs that would be used to reduce high pH.
5. Dewatering Plan. This plan would outline the management, containment, and disposal of concrete debris, slurry, and dust and discuss BMPs that would be used to reduce high pH.
6. Fugitive Dust Plan. This plan would outline measures to prevent generation of fugitive dust from exposed soil, construction traffic, and material stockpiles.
7. Contaminated Soil Management Plan (CSMP). This plan will be developed by the contractor to address details, including all BMPs, for handling and disposal of known and unanticipated contaminated soil material and spoils.

These plans, once completed, will be submitted to DPD prior to issuance of the shoreline substantial development permit for this project.

- B. Solid and liquid wastes and untreated effluents shall not enter any bodies of water or be discharged onto the land.*

In addition to the above BMPs, WSDOT would implement the following procedures as appropriate for construction or demolition to prevent the discharge of solid and liquid wastes into the water or on land.

- Floating sediment curtain. This barrier is designed to control the settling of suspended solids (silt) in water by providing a controlled area of containment. This turbidity is usually created by disrupting natural conditions through construction or dredging in the marine environment. The containment of settleable solids is desirable to reduce the impact area.
- Underwater containment system/temporary cofferdam. This system would be implemented to prevent sediment, concrete, and steel debris from mixing with surface waters. Examples could include a temporary cofferdam, an oversized steel casing, or another type of underwater containment system developed by the contractor. This application would allow demolition work to be completed on and around an underwater structure and isolate the work zone. The system would also allow work to be completed at or below the mudline as determined by removal requirements by the state. Construction water and slurry within the containment system could be removed, treated, and pumped to an approved discharge location upon completion of the demolition.
- Construction water treatment systems. These systems consist of temporary settling storage tanks, filtration systems, transfer pumps, and an outlet. The temporary settling storage tank provides residence time for the large solids to settle out. The filtration system is provided to remove additional suspended solids below an acceptable size (typically 25 microns). The pumps provide the pressure needed to move the water through the filter and then to an acceptable discharge location. Once the solid

contaminants are filtered out, the clean effluent is then suitable for discharge to a municipal storm drain or an acceptable discharge location. These systems can be located on a work bridge or a barge.

Additional information on in-water construction activities, effects from these activities, and associated BMPs is provided in Section 6.11, Ecosystems of the FEIS.

- D. The release of oil, chemicals or other hazardous materials onto or into the water shall be prohibited. Equipment for the transportation, storage, handling or application of such materials shall be maintained in a safe and leakproof condition. If there is evidence of leakage, the further use of such equipment shall be suspended until the deficiency has been satisfactorily corrected.*

No petroleum products, fresh cement, lime or concrete, chemicals or other toxic or deleterious materials that may be used during construction will be allowed to enter surface waters. Equipment in use at the staging and construction areas will be maintained in a safe and leak-proof condition and will be inspected regularly. Appropriate repairs will be made to prevent the release of such materials. Relevant BMPs and mitigation measures are discussed in substantial detail in Chapter 6 Construction Effects of the FEIS, and in the discipline reports and plans attached as addendums to the FEIS including the Geology and Soils Discipline Report; Water Resources Discipline Report; and Hazardous Materials Discipline Report. See discussion above regarding implementation of Construction Stormwater Pollution Prevention Plan and, in particular, Spill Prevention, Control, and Countermeasures Plan.

- E. All shoreline developments and uses shall minimize any increases in surface runoff, and control, treat and release surface water runoff so that receiving water quality and shore properties and features are not adversely affected. Control measures may include, but are not limited to, dikes, catch basins or settling ponds, interceptor drains and planted buffers.*

Stormwater management will be provided for the project and at the construction staging areas in accordance with applicable requirements. The contractor is responsible for the preparation and implementation of a Spill Prevention, Control and Countermeasure (SPCC) plan to be used for the duration of the proposed project. Relevant BMPs, including this SPCC plan, and mitigation measures are discussed in substantial detail in Chapter 6 Construction Effects of the FEIS, and in the discipline reports and plans attached as addendums to the FEIS including the Geology and Soils Discipline Report; Water Resources Discipline Report; and Hazardous Materials Discipline Report. See discussion above regarding implementation of Construction Stormwater Pollution Prevention Plan.

- F. All shoreline developments and uses shall utilize permeable surfacing where practicable to minimize surface water accumulation and runoff.*

WSDOT considered the practicality of permeable surfacing during design. However, in order for the collection and treatment of stormwater to occur, permeable surfaces may not be used on road or bridge surfaces.

*G. All shoreline developments and uses shall control erosion during project construction and operation.*

The contractor for the project is responsible for the preparation and implementation of a Temporary Erosion and Sediment Control Plan (TESCP). The TESC plan would detail the risk of erosion in different parts of the study area and would specify best management practices (BMPs) to be installed prior to construction activities and periodic maintenance and inspection procedures during construction. It would include environmental standards based on state regulations, such as turbidity and total suspended solids (TSS) levels in stormwater discharged from construction staging and work areas. Relevant BMPs and mitigation measures are discussed in substantial detail in Chapter 6 Construction Effects of the FEIS, and in the discipline reports and plans attached as addendums to the FEIS including the Geology and Soils Discipline Report; Water Resources Discipline Report; and Hazardous Materials Discipline Report. See discussion above regarding implementation of Construction Stormwater Pollution Prevention Plan.

*H. All shoreline developments and uses shall be located, designed, constructed and managed to avoid disturbance, minimize adverse impacts and protect fish and wildlife habitat conservation areas including, but not limited to, spawning, nesting, rearing and habitat areas, commercial and recreational shellfish areas, kelp and eel grass beds, and migratory routes. Where avoidance of adverse impacts is not practicable, project mitigation measures relating the type, quantity and extent of mitigation to the protection of species and habitat functions may be approved by the Director in consultation with state resource management agencies and federally recognized tribes.*

See Chapter 6 of the FEIS. All in-water construction activities, such as pile-driving, would occur during project-specific work windows approved by the regulatory agencies. WSDOT has coordinated with the regulatory agencies and the Muckleshoot Indian Tribe to establish site- and project-specific in-water work windows to minimize the potential for project activities to affect juvenile or adult salmonids.

In some instances, project-specific work windows may extend outside the published Washington State Department of Fish and Wildlife (WDFW) work window. While the work window extension has the potential to expose fish to construction effects, several factors would contribute to minimizing and reducing those effects. For instance, the proposed work windows continue to exclude months when a majority of juvenile salmonids are expected to migrate into Lake Washington, and few juvenile or adult salmonids are likely to occur in the project area during the construction period. Also, adult salmonids are anticipated to use deep waters, away from construction activities that could induce behavioral effects or injury. And finally, best management practices would minimize the size of the area affected by water quality and sound levels that could cause effects to fish.

Standard over-water and in-water construction and demolition BMPs would be implemented in accordance with environmental regulatory permit requirements and WSDOT specifications. Specific in-water construction time periods would also be established through the project permitting process to minimize potential effects of pile-driving and other in-water construction activities on salmonid species. During column and bridge construction, BMPs would be used to

avoid unintentional effects on habitat and water quality. Cofferdams, shaft castings, or other appropriate measures would be used to isolate work areas from open-water areas, particularly for concrete pouring activities, and work bridges would be used to minimize the use of barges in shallow water areas. Bibs would be used to contain falling debris during construction of the new bridge decking and demolition of the existing decking. A temporary erosion and sediment control plan, a spill prevention, control, and countermeasures plan, and a stormwater pollution prevention plan would be developed and implemented. Appropriate BMPs and noise attenuation methods will be developed in coordination with the regulatory agencies, the Muckleshoot Indian Tribe, and environmental permitting processes, and implemented to minimize potential effects of pile-driving activities.

Other BMPs could include:

- Avoiding or minimizing any spillage of concrete or other construction material into the water
- Avoiding or minimizing direct lighting effects from entering Lake Washington from construction activities by adjusting the angle of the lights and/or using bulbs in a non-white light spectrum
- Operating construction equipment from work bridges and barges where possible to minimize ground disturbance when working in or near sensitive areas
- Restoring cleared areas to preconstruction grades and replanting the areas with appropriate native herbaceous and woody species after construction

The Conceptual Aquatic Mitigation Plan (Attachment 9 to the FEIS) describes mitigation for aquatic resources effects. Temporary project effects that would likely require compensatory mitigation include partial shading and fill from the construction work bridges and falsework, which could increase predator use. These temporary effects would have the largest effect on juvenile Chinook as they migrate toward the Ship Canal in the shallow nearshore, where these work bridges are proposed to occur. Mitigation for these effects would occur at the Cedar River/Elliott Bridge Site as described in the *Montlake Bridge Environmental Critical Areas Technical Memorandum*, November 2011. See Section 1.1.3 (above) in this report for further details of shoreline habitat and buffer mitigation actions.

- I. All shoreline developments and uses shall be located, designed, constructed and managed to minimize interference with or adverse impacts to beneficial natural shoreline processes such as water circulation, littoral drift, sand movement, erosion and accretion.*

Neither the project construction nor the staging area use within the Shoreline District will require permanent development that would negatively impact natural shoreline processes such as water circulation, littoral drift, sand movement, erosion and accretion. The staging areas will be designed and managed to minimize interference with or adverse impacts to beneficial natural shoreline processes, primarily through the use of BMPs to minimize and prevent impacts to surface water quality. Relevant BMPs and mitigation measures are discussed in substantial detail in the FEIS and, in particular Chapter 5 Operation Effects, Chapter 6 Construction Effects, and the Ecosystems Discipline Report included as an Addendum to the FEIS. See discussion above regarding implementation of Construction Stormwater Pollution Prevention Plan.

- J. All shoreline developments and uses shall be located, designed, constructed and managed in a manner that minimizes adverse impacts to surrounding land and water uses and is compatible with the affected area.*

See Chapter 5 of the FEIS and the Land Use, Economics, and Relocation Discipline Report, and the Visual Quality and Aesthetics Discipline Report, both attached as Addendum to the FEIS.

During 2010, WSDOT sponsored several technical workgroups with resource agencies, with the intention of refining the proposal to further avoid or minimize negative land use and visual effects. The Parks and Natural Resource technical working groups collaborated on mitigating for impacts on parks, shorelines, wetlands, aquatic habitat, and other natural resources. These discussions have established minimization and mitigation concepts that will be further developed as the design progresses. These concepts, in turn, have influenced planning for the project's landscape and urban design.

In addition to the technical working groups, the workgroup established under Engrossed Substitute Senate Bill (ESSB) 6392 (discussed in Chapters 1 and 2 of the FEIS) refined specific areas and elements of the SR 520, I-5 to Medina project through a multi-agency process. Based on legislative direction, WSDOT and the Mayor and City Council of the City of Seattle established a workgroup that brought together King County Metro, University of Washington, Sound Transit, and other designees to consider design refinements and transit connections within the Preferred Alternative. These refinements have been included in the landscape and urban design concepts of the proposal.

The proposal incorporates many features that address concerns from communities regarding visual quality or otherwise provide aesthetic benefits. These include the following:

- A narrowed footprint across the Portage Bay Bridge and Foster Island, which would reduce visual presence and would minimize clearing of vegetation
- A lower floating bridge profile than the SDEIS options in response to community concerns
- A larger, full-width lid across Montlake Boulevard, providing more area for landscaping as well as increased community open space and visual benefits for nearby residents
- A landscaped median on Portage Bay Bridge to create a boulevard experience

Many of the project's stormwater facilities would be placed underground and out of sight, or if above-ground, would have natural-appearing landscaping, which would be consistent with the parks and open space where they are located. In the Shelby-Hamlin neighborhood, the addition of the stormwater treatment wetland, with appropriate design approaches by stormwater engineers and landscape architects, could be a positive visual change for the neighborhood because the large asphalt parking lot in East Montlake Park would be replaced by a natural-appearing wetland landscape that is in harmony with the adjacent shoreline and bay.

- K. Land clearing, grading, filling and alteration of natural drainage features and landforms shall be limited to the minimum necessary for development. Surfaces cleared of vegetation and not to be developed shall be replanted. Surface drainage*



*systems or substantial earth modifications shall be professionally designed to prevent maintenance problems or adverse impacts on shoreline features.*

Relevant BMPs and mitigation measures for consistency with these general development standards are discussed in substantial detail in Chapters 5 and 5 of the FEIS and, in particular, the Geology and Soils Discipline Report, Water Resources Discipline Report, and Land Use, Economics, and Relocation Discipline Report, all included in the FEIS as Addendum. See discussion above regarding implementation of Construction Stormwater Pollution Prevention Plan.

*L. All shoreline development shall be located, constructed and operated so as not to be a hazard to public health and safety.*

The replacement of the existing SR 520 project within the Shoreline District will not result in hazards to public health and safety. The staging and construction areas and the bridge, bike/pedestrian pathways and access ramps will be developed and operated in accordance with applicable safety standards and regulations. The project site and staging areas shall be appropriately secured to prevent potential hazards to public health and safety.

*M. All development activities shall be located and designed to minimize or prevent the need for shoreline defense and stabilization measures and flood protection works such as bulkheads, other bank stabilization, landfills, levees, dikes, groins, jetties or substantial site regrades.*

Neither the bridge replacement project nor the staging area use within the Shoreline District will require the implementation of such measures.

*N. All debris, overburden and other waste materials from construction shall be disposed of in such a way as to prevent their entry by erosion from drainage, high water or other means into any water body.*

Potential impacts of construction-related pollutants and/or erosion are summarized above and discussed in more detail in Chapter 6 of the FEIS. The contractor will provide for the disposal of all debris and other waste material associated with the proposed facilities in a manner that prevents their entry into any water body.

Relevant BMPs and mitigation measures are discussed in substantial detail in Chapter 6 Construction Effects of the FEIS, and in the discipline reports and plans attached as addendums to the FEIS including the Geology and Soils Discipline Report; Water Resources Discipline Report; and Hazardous Materials Discipline Report. See discussion above regarding implementation of Construction Stormwater Pollution Prevention Plan.

*O. Navigation channels shall be kept free of hazardous or obstructing development or uses.*

The proposed use of the site is compatible with open water and navigation uses. Open-water navigation routes are appropriately incorporated into the bridge design. The navigation channel located along the west transition span of the bridge would remain at its existing height, which was approved through the initial bridge permits under the authority of the United States Coast Guard (See pages 5.14-1 – 5.14-2 of the Final EIS).

Vessels passing under the new west approach will be able to use two navigation channels: one opening located under the west transition span and the other opening located one span west of the transition span. The minimum horizontal clearance for the west navigation channel openings is 142 feet. The minimum overhead vertical clearance for the westerly of the two navigation channels and the transition span will be approximately 47 feet and 43 feet, respectively. The shallowest water depth in the navigation channels is approximately 23 feet at the west edge of the westerly channel.

Intensive construction activities are anticipated to necessitate periodic temporary closures or complete blockages of both navigation channels. At no time shall the existing east and west navigation channels be closed or blocked simultaneously. The existing center channel draw-span shall be blocked no earlier than April 1, 2013. Prior to blocking the center draw-span, blockage of the east navigation channel will be cleared, limiting vertical clearance to that of the existing east navigation opening (57 feet minimum). The permanent vertical clearance of 70 feet for the east navigation channel will be established no later than March 31, 2015.

*Q. Submerged public right-of-way shall be subject to the following standards:*

- 1. All structures shall be floating except as permitted in subsection Q2 below;*

The design of the second Montlake Bridge cannot comply with this standard. The Montlake Bridge would be located entirely within WSDOT right-of-way and would span across the top of the Montlake cut connecting Montlake Boulevard both north and south of the Montlake cut.

WSDOT has requested and DPD grants a waiver of this standard because the project is an Essential Public Facility and cannot comply with the standard given the necessary design and location of the structure (e.g., matching existing grades and providing positive stormwater drainage and meeting seismic safety regulations).

- 2. Piling and dolphins may be permitted to secure floating structures only if the structures cannot be safely secured with anchors or with pilings or dolphins located outside of the right-of-way;*

No pilings or dolphins are proposed.

- 3. The maximum height of structures shall be fifteen feet (15');*

The Montlake Bridge design cannot comply with this standard. The second bascule bridge is designed to have essentially the same dimensions as the existing bridge. The bottom of the arched bridge would be approximately 35 feet above the water near the piers and approximately 46 feet above the water at mid-span. The overall height of the structure would be approximately 59 feet above the water when closed, and 135 feet above the water when open.

WSDOT has requested and DPD grants a waiver of this standard because the project is an Essential Public Facility and cannot comply with the standard given the necessary design and location of the structure.

4. *Structures shall not occupy more than thirty-five (35) percent of the right-of-way and shall not occupy more than forty (40) percent of the width of the right-of-way;*

The project will occupy approximately 38% of the right-of-way area and occupies up to a maximum of 29% of the right-of-way width. The area percentage is based on a geographic information system (GIS) analysis that measured the footprint of the proposed bridge and related structures against the right-of-way area. The width measurement was taken at the widest point of the proposed bridge structure within the right-of-way. Since the project is in excess of the maximum allowable area percentage, it does not meet this development standard.

WSDOT has request and DPD grants a waiver of this standards given the design elements described in Q(1) above.

5. *A view corridor or corridors of not less than fifty (50) percent of the width of the right-of-way shall be provided and maintained.*

The bridge structures that are part of this project will provide view corridors, and those corridors will exceed 50 percent of the width of the right-of-way, so the project meets this development standard.

6. *An open channel, unobstructed by vessels or structures for access to and from the water for public navigation and for access to adjacent properties shall be maintained.*

The project has been designed to provide the appropriate public navigation and access to adjacent properties. The proposed second Montlake Bridge is designed as a drawbridge to provide an open channel for public navigation within the Montlake Cut. The new bascule bridge would be constructed parallel to and just east of the existing Montlake Bridge. When open, the bridge provides unlimited vertical clearance for boat traffic.

#### **SMC 23.60.160 Standards for Regulated Public Access**

*A. 1. Regulated public access shall be a physical improvement in the form of any one (1) or combination of the following: Walkway, bikeway, corridor, viewpoint, park, deck, observation tower, pier, boat-launching ramp, transient moorage, or other areas serving as a means of view and/or physical approach to public waters for the public. Public access may also include, but not be limited to, interpretive centers and displays explaining maritime history and industry.*

*2. The minimum regulated public access shall consist of an improved walkway at least five (5) feet wide on an easement ten (10) feet wide, leading from the street or from a public walkway directly to a waterfront use area or to an area on the property from which the water and water activities can be observed. There shall be no significant obstruction of the view from this viewpoint.*

WSDOT's proposal includes a bicycle/pedestrian pathway on the new bridge structure, and connections to new pathways along the restored waterfront. The proposed pathway on the bridge will be 18 feet wide. The proposal meets the standard for regulated public access.

### **SMC 23.60.162 View Corridors**

*A. View corridors shall be provided for uses and developments in the Shoreline District as required in the development standards of the environment in which the use or development is located.*

The development standards for two of the shoreline environments associated with the project site (Conservancy Management and Urban Residential) requires a view corridor. (No view corridors are required in the CN shoreline environment.) However, the code requirement regarding view corridors is specific to work in "lots", both within SMC 23.60.162.B and within the individual shoreline environment development standards. The right-of-way does not meet the definition for "lot" (SMC 23.84A.024) so this development standard is not applicable to projects within the right-of-way.

The more specific view corridor development standard for submerged public right-of-way (SMC 23.60.152Q.6) is applicable and is discussed above

#### ***1.4.2.4.2 SMC 23.60.179 - 210 – Additional Development Standards Applicable to Specific Uses***

Development standards applicable to specific uses in all shoreline environments are established in SMC Sections 23.60.179 through 23.60.210. The following development standards are relevant to the proposed project:

- SMC 23.60.180 Sign standards

In subsection B.1, it is stated that signs permitted in the CN, CM, and UR environments shall be limited to identification signs, on-premises directional signs, and interpretive signs. The signs associated with the project would be identification and directional roadway signs. Their type, size, and lettering are regulated by federal and state highway signage standards.

- SMC 23.60.192 Standards for utility lines

New utility lines are to be constructed within existing utility corridors, to the extent practicable, and are to be located underground, under water, or attached to new structures. There will be new stormwater lines leading from the bridge to new stormwater facilities (constructed wetland).

- SMC 23.60.194 Standards for intakes and outfalls

All intakes and outfalls shall be located so they will not be visible at mean lower low water, and shall be designed and constructed to prevent the entry of fish. New stormwater outfalls will comply with State NPDES requirements and will be consistent with City regulations.

- SMC 23.60.206 Streets

New streets are permitted in the Shoreline District to serve lots in the Shoreline District and to connect to public access facilities. Street improvements to Montlake Boulevard are proposed to connect the new bridge structure.

#### ***1.4.2.4.3 Development Standards Applicable to CM Environment***

- SMC 23.60.452 Critical habitat protection in the CM Environment

All developments in the CM Environment shall be located and designed to minimize disturbance of any critical habitat area.

See discussion of temporary and permanent impacts and mitigation above in Section 1.1.3.3, Fish and Wildlife Habitat Conservation Area Mitigation, and 1.4.2.1 Shoreline Policies. Development in critical natural areas has been avoided where possible, and minimized to the extent feasible. Where impacts have been found to be unavoidable, adequate on and off-site mitigation has been proposed.

- SMC 23.60.454 Height in the CM Environment

SMC 23.60.454.A sets a maximum height in the CM environment for Lake Washington at fifteen (15) feet. In SMC 23.60.454.E, the code states “bridges may extend above the maximum height limit.” The need for increased height for the bridge structure has been previously discussed.

- SMC 23.60.460 Regulated Public Access

On public property, public access shall be provided and maintained on all publicly owned and publicly controlled waterfront whether leased to private lessees or not, except when the property is submerged land which does not abut dry land. The proposal includes a bike/pedestrian pathway on the bridge and connections to new bike/pedestrian pathways off the bridge. These new pathways will provide and maintain public access.

#### ***1.4.2.4.4 Development Standards Applicable to CN Environment***

There are no requirements for regulated public access or view corridors on the CN Environment.

- SMC 23.60.270 Development standards in the CN Environment

In addition to development standards applicable to all environments contained in Subchapter III, General Provisions, developments in the Conservancy Navigation Environment shall be located and designed to avoid interference with navigation. Buoys or other markings may be required to warn of navigation hazards. The proposal has been designed to avoid interference with navigation.

#### ***1.4.2.4.5 Development Standards Applicable to UR Environment***

- SMC 23.60.570 Development Standards in the UR Environment

*All development in the Urban Residential Environment shall meet the requirements of this Part 2 as well as the development standards applicable to all environments contained in Subchapter III, General Provisions.*

See analysis below.

- SMC 23.60.572 Height in the UR Environment

SMC 23.60.572.A sets a maximum height in the UR environment at thirty (30) feet except as modified by Sections B through E of the section.. In SMC 23.60.572.E, the code states “bridges may extend above the maximum height limit.” The need for increased height for the bridge structure has been previously discussed.

- SMC 23.60.574 Lot Coverage in the UR Environment

In SMC 23.60.574.A, structures are limited to 35% of the waterfront upland lot, except as modified by subsection B. This development standard applies to “lots”; the project site is submerged public right-of-way and does not meet the definition for “lot” (SMC 23.84A.042). More specific standards for right-of-way coverage is found above under SMC 23.60.152.Q4.

- SMC 23.60.578 Regulated public access in the UR Environment

On public property, public access shall be provided and maintained on all publicly owned and publicly controlled waterfront whether leased to private lessees or not, except when the property for harbor areas, shorelands, tidelands, and beds of navigable waters not abutting dry land. The proposal includes a bike/pedestrian pathway on the bridge and connections to new bike/pedestrian pathways off the bridge. These new pathways will provide and maintain public access.

### **1.4.3 The Provisions of Chapter 173-27 WAC**

Chapter 173-27 WAC sets forth permit requirements for development in shoreline environments, and gives the authority for administering the permit system to local governments. The State acts in a review capacity. The Seattle Municipal Code Section 23.60 (Shoreline Development) incorporates the policies of the WAC by reference. These policies have been addressed in the foregoing analysis and have fulfilled the intent of WAC 173-27.

### **1.4.4 Decision – Shoreline Substantial Development Permit**

The proposed shoreline substantial development permit is **CONDITIONALLY GRANTED**. Shoreline Substantial Development conditions are listed below in Section 1.6.

## 1.5 ANALYSIS – STATE ENVIRONMENTAL POLICY ACT (SEPA)

WSDOT's 2006 Draft Environmental Impact Statement (EIS) analyzed proposed corridor construction from the I-5 interchange in Seattle to just west of I-405 in Bellevue. The 2010 Supplemental Draft EIS evaluated the effects of a No Build Alternative and three 6-lane design options for the SR 520 corridor from I-5 to Medina. A Preferred Alternative, similar to Option A, was identified in April 2011 following consideration of comments on the SDEIS.

The June 2011 Final EIS and Final Section 4(f) and 6(f) Evaluations analyzed a No Build Alternative along with a Preferred Alternative and the three SDEIS design options for the I-5 to Medina corridor. The Preferred Alternative and the design options would replace vulnerable structures, add continuous HOV lanes, and include landscaped lids over SR 520 to reconnect neighborhoods that are now separated by the highway.

DPD's SEPA review of the SR 520 Seattle-side projects is limited to application of substantive authority and mitigation, as found in Seattle's Environmental Policies and Procedures ([SMC 25.05.660](#)). This is because WSDOT, as lead agency, has already completed the threshold determination process, which resulted in a Determination of Significance, and publication of the subsequent Environmental Impact Statement (EIS).

The substantive authority role allows the City to consider mitigation for impacts that were identified in the EIS for the SR 520 Replacement projects using the 'policies, plans, rules, or regulations' designated in the city's SEPA ordinance (SMC 25.05).

The SEPA Overview Policy (SMC 25.05.665) establishes the relationship among codes, policies, and environmental review. Specific policies for specific elements of the environment, certain neighborhood plans, and other policies explicitly referenced may serve as the basis for exercising substantive SEPA authority. The Overview Policy states in part:

"[W]here City regulations have been adopted to address an environmental impact; it shall be presumed that such regulations are adequate to achieve sufficient mitigation" (subject to some limitations).

Under certain limitations/circumstances (SMC 25.05.665 D 1-7) additional mitigation can be considered. The impacts identified in WSDOT's environmental documents and the City's SEPA policies are provided below.

### 1.5.1 Short-Term and Temporary Impacts

A number of temporary or construction-related impacts are expected from the anticipated 2.5-year construction period for this project, which are discussed in detail in the Final EIS (Chapter 6) and relevant Appendices or Addendums.

Several adopted City codes and/or ordinances provide mitigation for some of the identified impacts. Specifically these are: Stormwater, Grading and Drainage Control Code (grading, site excavation and soil erosion); Street Use Ordinance (watering streets to suppress dust, removal of debris, and obstruction of the pedestrian right-of-way); the Building Code (construction measures in general); and the Noise Ordinance (construction noise). In addition federal and State regulations and permitting authority are effective to control short-term impacts on water

quality. Compliance with these applicable codes and ordinances will reduce or eliminate most of the short-term impacts to the environment. Some of these impacts are further discussed below.

### **1.5.1.1 General Construction Impacts**

#### ***1.5.1.1.1 Short Term or Temporary Impacts***

Seattle's SEPA policy regarding construction impacts recognizes that the construction process creates temporary impacts on the site and the surrounding area. The proposal is identified as having significant adverse impacts and mitigation measures have been planned in order to address the usual and direct impacts of noise, vibration, truck traffic, and air quality to name a few. There are also specific environmental policies for most of these types of impacts that may occur in the short-term and/or the long-term. Those impacts and the related SEPA policy discussion are detailed in the following paragraphs. Construction-related impacts not specifically addressed by a related SEPA policy (such as recreation or vibration) can be addressed under the authority of the Construction Impacts policy. The Community Construction Management Plan (CCMP) is the tool identified to address construction-related impacts and is included below as the proposed mitigation for these impacts.

**Recreation.** As described above in the project description (1.1.2), construction would affect the Ship Canal Waterside Trail. The 1,200-foot-long trail is located east and west of Montlake Boulevard along the south side of the Montlake Cut. The trail connects to the Arboretum Waterfront Trail in East Montlake Park and West Montlake Park on Portage Bay. The trail can be accessed from Montlake Boulevard as well as from East Montlake Park at East Shelby Street.

- During construction of the bascule bridge, the trail would be closed to access from Montlake Boulevard East.
- Portions of the trail outside of the construction limits would be accessible from either West Montlake Park or East Montlake Park. However, pedestrians would not be able to pass through the construction area at Montlake Boulevard East, which would disrupt the connectivity of the trail during the 2.5-year construction period.
- Potential detours for the trail have been examined by WSDOT, but WSDOT found that no detours would be possible due to the construction on Montlake Boulevard East.
- The existing pedestrian access to the trail from Montlake Boulevard East would be relocated approximately 40 feet to the east of its existing location after completion of the project.

**Greenhouse Gas Impacts.** Construction activities including construction worker commutes, truck trips, the operation of construction equipment and machinery, and the manufacture of the construction materials themselves result in increases in carbon dioxide and other greenhouse gas emissions that adversely impact air quality and contribute to climate change and global warming. The analyses described above in Chapter 6 of the Final EIS and in the Air Quality Discipline Report Addendum and Errata address project-related impacts due to greenhouse gas emissions. Mitigation measures are discussed in Chapter 6 of the Final EIS to reduce fuel usage. Because GHG emissions are related to fuel consumption, any steps taken to minimize fuel use would reduce GHG emissions as well, and mitigate for these impacts. No additional mitigation pursuant to SEPA is warranted.



### ***1.5.1.1.2 General Proposed Mitigation***

As requested by the Department of Archaeological and Historic Preservation, and outlined in the Section 106 Programmatic Agreement, WSDOT and the construction contractor will develop a community construction management plan (CCMP) for each funded phase of project construction. The final CCMP will be developed and implemented prior to construction. The development of a CCMP is also identified as a commitment in the Memorandum of Understanding (MOU) between the WSDOT and the City of Seattle. The MOU was signed by the Mayor and City Council in October 2011.

A CCMP is a set of tools and commitments to help minimize the effects of construction on the public by providing timely and responsive information, as well as implementing standard specifications and best practices. A CCMP is in development for the floating bridge and landings portion of the corridor, which has received funding for construction. A CCMP will be developed with public input for each future construction phase in Seattle that receives funding, including natural resources mitigation sites. Key topics that will be addressed in the CCMP will include:

- Noise
- Vibration
- Air quality and fugitive dust
- Visual quality: aesthetics, glare, lighting
- Traffic and transportation (haul routes, traffic, detours, street parking, damage resulting
  - from heavy trucks and hauling, access, including emergency service access
- Utilities and services
- Vegetation management and erosion control
- In-water work (construction barges, work bridges, pontoon moorage, pontoon towing)

For each of the topics listed above, the CCMP will address the following questions:

- 1) What can the public expect?
- 2) What are the applicable commitments from the Section 106 Programmatic Agreement?
- 3) What regulations must WSDOT and the contractor comply with?
- 4) What else are WSDOT and the contractor doing to avoid, minimize, and mitigate for construction effects on local communities and historic properties?
  - a. BMPs and WSDOT standard specifications.
  - b. Additional agreements, such as environmental commitments made through other regulatory and permitting processes.
  - c. Additional tools that will be used to avoid, minimize, and mitigate construction effects on local communities and historic properties.
- 5) Specific communication tools to address this concern: How can the public get more information or talk to someone about concerns?

Additional processes that will implement the goals of the Community Construction Management Plan are the Neighborhood Traffic Management Plan (where applicable), and the Tree and Vegetation Management and Protection Plan. These are described in more detail below, and will

have a separate final product. The final work product will be a Community Construction Management Plan, and this document will be submitted to the City.

### **1.5.1.2 Air Quality**

#### ***1.5.1.2.1 Short Term or Temporary Impacts***

Construction impacts for the project are discussed in Chapter 6 of the Final EIS (2011) and Attachments, including the Air Quality Discipline Report Addendum and Errata. Information provided in the Final EIS includes the results of a quantitative analysis prepared for the peak construction year for the West Approach (Table 6.8-1).

Air quality effects from construction of the SR 520 Replacement Project would occur primarily as a result of emissions from heavy-duty construction equipment (such as bulldozers, backhoes, and cranes), diesel-fueled mobile sources (such as trucks, brooms, and sweepers), diesel- and gasoline-fueled generators, and on- and offsite project-related vehicles (such as service trucks and pickups). Dust emissions would also occur and would be associated with demolition, land clearing, ground excavation, cut-and-fill operations, and roadway and interchange construction.

#### ***1.5.1.2.2 Proposed Mitigation: Air Quality***

Chapter 6 of the Final EIS included description and discussion of mitigation measures to address the potential impacts identified in these analyses, including implementation of WSDOT's Memorandum of Understanding with Puget Sound Clean Air Agency (PSCAA) to comply with PSCAA regulations that require dust control during construction and to prevent deposition of mud on paved streets. The CCMP will also provide mitigation for short term or temporary impacts to air quality. With these measures in place, no additional mitigation pursuant to Seattle's SEPA policy on Air Quality or Construction Impacts is warranted.

### **1.5.1.3 Surface Water Quality**

#### ***1.5.1.3.1 Short Term or Temporary Impacts***

Construction impacts for the project are discussed in Chapter 6 of the Final EIS (2011) and Attachments, including the Water Resources Discipline Report Addendum and Errata and the Hazardous Materials Discipline Report Addendum and Errata. Temporary construction-related effects on water quality and mitigation for these effects are addressed in more detail in each of the two Discipline Reports

#### ***1.5.1.3.2 Proposed Mitigation: Water Quality***

Construction effects on surface water would be avoided, minimized, and mitigated, and the amount of required treatment would be minimized and mitigated by the development, implementation, and ongoing updating of certain management plans, listed and summarized in Chapter 6 of the Final EIS. Construction of the project would require the development and implementation of temporary erosion and sediment control (TESC) and spill prevention, control, and countermeasures (SPCC) plans (WSDOT 2008a). A TESC plan would detail the risk of erosion in different parts of the study area and would specify best management practices (BMPs) to be installed prior to construction activities and periodic maintenance and inspection procedures during construction. It would include environmental standards based on state

regulations, such as turbidity and total suspended solids (TSS) levels in stormwater discharged from construction staging and work areas.

A SPCC plan would also be prepared to prevent, control, and identify countermeasures for potential spills of hazardous materials during construction, as required by WSDOT Standard Specification 1-07.15(1) (WSDOT 2008d). Additional information on the requirements of SPCC plans is provided in the 2009 Hazardous Materials Discipline Report (Attachment 7 to the Final EIS).

Construction of the project would require compliance with approved TESC and SPCC plans. The project would also require a concrete containment and disposal plan (CCDP). The CCDP would outline how concrete would be managed, contained, and disposed, and what pH levels would be mitigated to ensure that pH changes due to concrete construction and demolition activities do not harm aquatic species.

Containment of pollutants during in-water construction is key to maintaining water quality. In addition to the above BMPs, WSDOT would implement the following procedures as appropriate for construction or demolition.

- Floating sediment curtain - This barrier is designed to control the settling of suspended solids (silt) in water by providing a controlled area of containment. This turbidity is usually created by disrupting natural conditions through construction or dredging in the marine environment. The containment of settleable solids is desirable to reduce the impact area.
- Underwater containment system/temporary cofferdam – This system would be implemented to prevent sediment, concrete, and steel debris from mixing with surface waters. Examples could include a temporary cofferdam, an oversized steel casing, or another type of underwater containment system developed by the contractor. This application would allow demolition work to be completed on and around an underwater structure and isolate the work zone. The system would also allow work to be completed at or below the mudline as determined by removal requirements by the state. Construction water and slurry within the containment system could be removed, treated, and pumped to an approved discharge location upon completion of the demolition.
- Construction water treatment systems - These systems consist of temporary settling storage tanks, filtration systems, transfer pumps, and an outlet. The temporary settling storage tank provides residence time for the large solids to settle out. The filtration system is provided to remove additional suspended solids below an acceptable size (typically 25 microns). The pumps provide the pressure needed to move the water through the filter and then to an acceptable discharge location. Once the solid contaminants are filtered out, the clean effluent is then suitable for discharge to a municipal storm drain or an acceptable discharge location. These systems can be located on a work bridge or a barge.

Additional information on in-water construction activities, effects from these activities, and associated BMPs is provided in Section 6.11, Ecosystems, of the Final EIS.

Seattle's SEPA Water Quality policy anticipates that local, state and federal regulations address potential impacts from construction site runoff. In addition, Seattle's Environmental Critical

Areas Ordinance and Shoreline Master Program provide regulatory authority for mitigating water quality impacts on wetland and shoreline habitats. See discussion above in Shoreline analysis section regarding implementation of the Construction Stormwater Pollution Prevention Plan and the ECP.

The CCMP will also provide mitigation for short term or temporary impacts to Surface Water Quality. With these measures in place, no additional mitigation pursuant to Seattle's SEPA policy on Surface Water Quality is warranted.

#### **1.5.1.4 Drainage and Earth**

##### ***1.5.1.4.1 Short Term or Temporary Impacts***

The construction-related effects from this project on earth and groundwater are addressed in Chapter 6 of the Final EIS and in the Geology and Soils Discipline Report Addendum and Errata.

##### ***1.5.1.4.2 Proposed Mitigation: Drainage and Earth***

The construction-related effects from this project on earth and groundwater and mitigation measures to address and minimize these effects are addressed in Chapter 6 of the Final EIS and in the Geology and Soils Discipline Report Addendum and Errata. Any additional information required to verify conformance with applicable ordinances and codes (The Stormwater Code and Director's Rule 16-2009) will be required prior to issuance of any required building permits or demolition permits. See discussion above in Shoreline analysis section regarding implementation of the Construction Stormwater Pollution Prevention Plan and the ECP.

A TESC plan will be required to adequately and systematically identify and minimize project risk. The purpose of the TESC plan is to clearly establish when and where specific best management practices (BMPs) will be implemented to prevent erosion and the transport of sediment from a site during construction. The TESC plan sheets will show the BMP locations and other features such as topography and sensitive area locations for multiple project stages.

Potential BMPs are as follows:

- Maintaining vegetative growth and providing adequate surface water runoff systems
- Using quarry spalls and, possibly, truck washes at construction vehicle exits from the construction site
- Regularly sweeping and washing adjacent roadways
- Constructing silt fences downslope of all exposed soil
- Using quarry spall lined temporary ditches, with periodic straw bales or other sediment catchment dams
- Providing temporary covers over soil stockpiles and exposed soil
- Using temporary erosion-control blankets and mulching to minimize erosion prior to vegetation establishment
- Constructing temporary sedimentation ponds for removal of settleable solids prior to discharge
- Limiting the area exposed to runoff at any given time
- Frequently watering exposed surface soils to minimize visible dust

Where construction dewatering could result in settlement that might damage adjacent facilities, mitigation could include the following:

- Re-injecting the pumped groundwater between the dewatering wells and the affected facility
- Using construction methods that do not require dewatering

The CCMP will also provide mitigation for short term or temporary impacts to Drainage and Earth. With these measures in place, no additional mitigation pursuant to Seattle's SEPA policy on Drainage and Earth is warranted.

#### **1.5.1.5 Traffic and Parking**

##### ***1.5.1.5.1 Short Term or Temporary Impacts***

The construction-related effects related to traffic and parking are addressed in Chapter 6 of the Final EIS and in the Final Transportation Discipline Report attached to the Final EIS. The analysis includes effects on local streets, the regional freeway system, truck transportation, transit, and bicycle and pedestrian travel.

Construction of the project, including use of some areas for contractor staging, would require adjustments to the existing lanes and intersections on roadways. Construction equipment and activities would occupy a portion of the transportation right-of-way and construction truck traffic would be present on the roadways. These could affect the capacity of the roadway and pose distractions to drivers. During off-peak traffic periods, some travelers would encounter lane closures. Some local street delays can be expected during reconstruction of the Montlake Boulevard East bridge over SR 520, but during most of the construction period, congestion is expected to be similar to existing conditions due to temporary roadway improvements.

The most substantial construction effects would be related to closure of the Lake Washington Boulevard ramps to and from SR 520. When the ramps are closed, more traffic would travel through the Montlake/SR 520 interchange, resulting in some changes in local street traffic operations. There is limited transportation right-of-way available in the Montlake interchange area for construction activities to take place, and existing transportation conditions are congested. WSDOT would make improvements along Montlake Boulevard during construction to accommodate the temporarily increased activity and traffic.

When nearby routes are closed, bicyclists and pedestrians would experience increased traffic on the sidewalks and crossings along Montlake Boulevard. Bicyclists and pedestrians would also be exposed to increased vehicle traffic on the roadway when the Lake Washington Boulevard ramps are closed. Construction of the Montlake lid and interchange would affect Montlake Boulevard near SR 520 for about 4 years. Construction activities could restrict bicycle and pedestrian access to one side of Montlake Boulevard over SR 520 for short periods of time. Major realignments of Montlake Boulevard would be needed during construction. The pedestrian crossings would be realigned along the section of Montlake Boulevard over SR 520. Safe access meeting the Americans with Disabilities Act requirements will be provided throughout construction.

The temporary roadway capacity improvements during construction would allow traffic conditions to remain similar to existing conditions throughout most of the construction period. However, increased traffic from Lake Washington Boulevard, in combination with the presence of construction activities along Montlake Boulevard, is expected to increase delay at the Montlake interchange during three periods of construction. Throughout construction, there would be intermittent short-term lane closures along ramps, local streets, and the highway. These closures would be limited to nights and weekends when traffic volumes are lowest. Lane closures are not expected to substantially affect traffic operations during off-peak travel times. However, travelers can expect intermittent delays and, during isolated construction activities, some travelers would need to use alternate routes to reach their destinations. WSDOT would notify the public of all times when travel through the project area could be disrupted.

The most substantial changes in traffic volumes would occur when the Lake Washington Boulevard ramps are closed beginning in year 3. Before the north side of the west approach bridge can be constructed, the westbound off-ramp to Lake Washington Boulevard must be closed and removed to make room for new construction. Later, the eastbound on-ramp would be closed to allow the south side of the west approach bridge to be constructed. When the ramps are closed, traffic that currently uses them would transition to using the Montlake interchange, which would be the permanent location for access to and from SR 520 in the Montlake vicinity. Drivers who currently use the Lake Washington Boulevard ramps would reach the Montlake interchange via Lake Washington Boulevard or 24th Avenue East (Exhibit 6.1-1 in the Final EIS).

WSDOT evaluated the local street traffic conditions that would be likely during construction. Traffic operations would vary during the construction timeline at some locations. The results of the traffic operations analysis for affected intersections are shown in Table 6.1-2 of the Final EIS. The results in Table 6.1-2 of the Final EIS show that most intersections would function similarly to existing conditions, and better in some cases because the temporary intersection improvements would be included. Delay would increase at three locations: Montlake Boulevard East/SR 520 westbound ramps (from LOS B to C during years 3 and 4), Montlake Boulevard East/Lake Washington Boulevard/ Eastbound SR 520 ramps (from LOS E to F during the AM peak hour in year 6) and Montlake Boulevard East/East Shelby Street (from LOS B to C during the morning peak in the last year of construction). The increased delay at these three locations would not happen at the same time.

#### ***1.5.1.5.2 Proposed Mitigation: Traffic and Parking***

WSDOT has proposed a number of mitigation measures designed to minimize impacts to traffic and parking during the construction phase of the Montlake Bridge. These measures include construction timing and coordination with jurisdictions and neighborhoods, development of and implementation of a Transportation Management Plan (TMP), and a more neighborhood specific Neighborhood Transportation Management Plan (NTMP). The proposed measures are summarized below.

**Construction Timing and Coordination:** WSDOT will perform the following:

- Restrict lane closures to nights and weekends, when traffic volumes are lowest (to the maximum extent practicable).

- Engage in regular, ongoing coordination with all affected jurisdictions to identify potential conflicts with other projects or public events, and plan for isolated construction activities that require special transportation considerations.
- Implement a continuous public information program to inform travelers, nearby residents, and businesses about transportation conditions, upcoming changes, and travel options during construction.
- Work to manage the flow of traffic and minimize traffic demand during construction using a combination of methods, all of which will be incorporated into the construction traffic management plan (TMP). The traffic management plan will be coordinated with the public outreach communications plan.

Other mitigation options include developing and implementing work zone management strategies. These strategies may include using intelligent transportation systems, traveler information, real-time work zone monitoring, traffic incident management, and enforcement techniques. More details on strategies feasible for this project are described in Chapter 6 of the Final EIS and are summarized below.

- Traveler Information Systems - Traveler information systems are designed to inform the general public of construction activities and transportation system operating conditions. Examples include, but are not limited to, dynamic and variable message signs, highway advisory radio, e-mail alerts, and project Web sites that provide real-time information on traffic conditions around construction and outlying areas.
- Incident Management Systems - Incident management systems are planned and coordinated strategies to detect, respond to, and remove traffic incidents to restore traffic capacity as safely and quickly as possible. The process of restoring traffic capacity involves law enforcement, fire and rescue, emergency medical services, transportation, public safety communications, emergency management, towing and recovery services, hazardous materials contractors, and traffic information media.
- Active Traffic Management - Active traffic management technology controls traffic based on the prevailing conditions. Potential tools include: overhead sign bridges to display variable speed limit and real-time traffic information; variable speed limit to reduce speed limits approaching areas of congestion, collisions, or special events; queue warning to warn commuters of downstream queues (or backups) and direct through-traffic to alternate lanes; and travel time signs to display estimated travel time and other condition reports..
- Construction Worker Shuttle Service - This service shuttles workers from outlying temporary or permanent parking facilities into the work zones, thereby reducing the number of vehicles arriving at and leaving the work zone areas and the parking demand in the work zones.

Several strategies would be used to help mitigate construction activities during special events, including graduations, city functions, and sporting events at the UW:

- Tailor special event traffic management plans to consider project construction congestion, including transit priority and special event shuttle services.
- Increase shuttle services so access is provided both to and from events.
- Provide event discounts with the use of transit shuttles.

- Implement additional event date/time-specific parking restrictions.
- Add police officer traffic control as needed.
- Provide a Web site and other outreach regarding construction and travel options to special events that is accessible and understandable.
- Restrict construction activities during major events.

**Transportation Management Plan (TMP):** WSDOT will prepare a construction TMP, in coordination with other stakeholders, to ensure that construction effects on local streets, property owners, and businesses are minimized.

The TMP will include, as a minimum, the following measures:

- Details on required street and lane closures (duration and timing)
- Proposed detours and signing plans (for vehicles, pedestrians, freight, and bicycles)
- Compliance with Americans with Disabilities Act accessibility requirements.
- Measures to minimize effects on transit operations and access to/from transit facilities (in coordination with transit service providers)
- Traffic enforcement measures, including deployment of police officers
- Coordination with emergency service providers
- Measures to minimize traffic and parking effects from construction employees
- Measures to minimize effects of truck traffic for equipment and material delivery
- Measures to minimize disruption of access to businesses and properties
- Measures to minimize conflicts between construction activities and traffic during events

As part of the construction TMP, WSDOT will evaluate a set of temporary Transportation Demand Management (TDM) and transit enhancements to provide additional travel options to the public during construction. WSDOT will focus on supporting existing programs rather than implementing an entirely new program during the construction period.

TDM includes a variety of strategies that provide alternatives to driving in single-occupant vehicles, particularly during peak traffic periods. TDM programs include financial incentives, outreach to increase public awareness about travel options, services that help people choose a new travel option, and new travel options such as vanpools to encourage a shift away from travel in single occupant vehicles. The goal of TDM is to increase the efficiency of travel on roadways by moving more people in fewer vehicles. Transit is typically a primary consideration for any comprehensive TDM program because it is a reliable mode of moving many people in fewer vehicles. The people-moving capacity of transit is necessary for many TDM strategies to be successful. WSDOT is coordinating with King County Metro and Sound Transit to develop construction management plans that maintain the reliability of transit as an alternative to driving. WSDOT will continue this coordination throughout construction.

The TDM strategy and goals for the project will be developed during the final planning phase of the project. WSDOT will develop demand management goals based on the estimated construction effects on traffic for the project. The goals will be designed to complement the other construction traffic management techniques that will be implemented. WSDOT will evaluate areas of greatest need and benefit to maximize traveler options in those areas.



**Neighborhood Traffic Management Plan (NTMP):** To ensure that neighborhood specific traffic issues are adequately addressed, WSDOT and the Seattle Department of Transportation (SDOT) will collaborate to develop a NTMP. The final NTMP will be developed and implemented prior to construction. The purpose of the NTMP will be to catalog and develop solutions for community traffic concerns in the corridor and surrounding neighborhoods, and to identify potential funding sources for projects consistent with the recommendations and findings of the ESSB 6392 Final Workgroup Technical Report. The NTMP will define traffic management measures to proactively reduce project construction effects and develop long term traffic management strategies that work in management practices. A timeline and schedule for the development of the NTMP will be completed by the end of 2011. Public outreach efforts, including the formation of a community advisory group, will begin in 2012.

As conditioned, the proposal's construction- related impacts can be adequately mitigated, pursuant to the authority in SEPA's Traffic and Transportation and Construction Impacts policies.

#### **1.5.1.6 Noise**

##### ***1.5.1.6.1 Short Term or Temporary Impacts***

Construction-related impacts related to noise are addressed in Chapter 6 of the Final EIS and in the Noise Discipline Report Addendum and Errata attached to the Final EIS. Noise would include the use of typical construction equipment, impact construction equipment (e.g., pavement breakers, pile-drivers, jackhammers, and sandblasting tools), and non-impact noise-producing equipment such as concrete pumps, cranes, excavators, haul trucks, loaders, and tractor trailers.

The City of Seattle has developed a set of construction-specific allowable noise-level limits that would apply to construction within the Seattle city limits. Unlike the Washington Administrative Code, the Seattle Municipal Code does not exempt daytime construction activities from regulation. Table 6.7-2 in Chapter 6 of the Final EIS includes the maximum permissible sound levels depending on the district designations of the sound source and receiving properties (rural, residential, commercial, or industrial). Most project construction could be performed within the indicated noise limits shown in Tables 6.7-2 if the work was performed during normal daytime hours. If construction occurred at night, WSDOT would be required to meet the noise level requirements for night-time construction or obtain a noise variance from the governing jurisdiction.

##### ***1.5.1.6.2 Proposed Mitigation: Noise***

The project will need to meet the requirements of the City of Seattle noise ordinance and the conditions of any variance that may be obtained. Several construction noise and vibration abatement methods—including operational methods, equipment choice, or acoustical treatments—could be implemented to limit the effects of construction. The methods used might vary in the project corridor, depending on the type of construction. The following list describes some of the more common construction noise and vibration abatement methods that could be used.

- Operation of construction equipment could be limited wherever possible within 500 feet of any occupied dwelling unit during nighttime hours or on Sundays or legal holidays, when noise and vibration would have the most severe effect.
- Mufflers would be required on all engine-powered equipment, and all equipment would be required to comply with EPA equipment noise standards.
- WSDOT could limit activities that produce the highest noise levels (such as hauling, loading spoils, jackhammering, and using other demolition equipment) to daytime hours.
- Minimization of the noise associated with pile-driving could include limiting the time the activity could take place.
- Other less effective methods of reducing noise from pile-driving are coating the piles, using pile pads, or using piston mufflers.

A construction log could be kept for each of the construction staging areas. The log could contain general construction information such as the time an activity took place, type of equipment used, and any other information that might help identify the equipment and activities causing any noise exceedances or generating complaints about noise. Tracking this type of information would help the contractor manage noise effects by pinpointing problematic activities or equipment, and facilitating quick resolution of any issues or exceedances.

A complaint hotline could also be established to investigate noise complaints and compare them to the construction logs. A construction monitoring and compliance program could help to ensure that all equipment met state, local, and manufacturer's specifications for noise emissions. Equipment not meeting the standards could be removed from service until proper repairs were made, and the equipment re-tested for compliance. This procedure could be used for all haul trucks, loaders, excavators, and other equipment that would be used extensively at the construction sites and that would contribute to potential noise effects.

The following is a list of potential noise mitigation measures that could be included in the construction contract specifications:

- Minimize noise by regular inspection and replacement of defective mufflers and parts that do not meet the manufacturer's specifications.
- Install temporary or portable acoustic barriers around stationary construction noise sources and along the sides of the temporary bridge structures, where feasible and practical.
- Locate stationary construction equipment as far from nearby noise-sensitive properties as possible.
- Shut off idling equipment.
- Reschedule construction operations to avoid periods of noise annoyance identified in complaints.
- Notify nearby residents and institutions whenever extremely noisy work would be occurring.
- Restrict the use of back-up beepers during evening and nighttime hours or other hours if warranted by complaints.

Additional noise mitigation measures may be implemented as more details on the actual construction processes are developed and as part of any noise variance that may be required.

Any requests from WSDOT for construction noise variances for this project will generate specific mitigation requirements from the Seattle Department of Planning and Development that will be specified in any issued noise variance. As conditioned, the proposal's construction-related noise impacts can be adequately mitigated, pursuant to the authority in SEPA's Noise and Construction Impacts policies.

#### **1.5.1.7 Plants and Animals**

##### ***1.5.1.7.1 Short Term or Temporary Impacts***

Section 6.11 of Chapter 6 of the Final EIS describes the construction impacts on ecosystems (including wetlands, fish, fish and aquatic habitat, wildlife, and federally and state listed species). Construction activities for the proposed second Montlake Bridge over the waters of Lake Washington could have a variety of effects on fish and other aquatic species. These activities include temporary and permanent shading from work bridges and the proposed second bridge. Wildlife and habitat may be affected by temporary clearing and shading of vegetation. The Ecosystems Discipline Report Addendum and Errata (Attachment 7 to the Final EIS) provides a detailed technical discussion on potential effects.

Other potential short-term construction effects could include spills of hazardous materials (e.g., oil and gasoline), chemical contaminants, or other pollutants. To reduce potential spills of petroleum and hydraulic fluids in sensitive areas, maintenance or fueling of construction equipment, vehicles, or vessels would not be allowed within 200 feet of the area waterways without the implementation of appropriate spill prevention and control measures. Materials that modify pH—including cement, cement grindings, and cement saw cuttings—would be managed so that they will not contaminate surface water runoff or otherwise enter the area waterways.

##### ***1.5.1.7.2 Proposed Mitigation: Plants and Animals***

A spill prevention, control, and countermeasures plan and a concrete containment and disposal plan will be developed before beginning construction (see discussion above in Shoreline Substantial Development Permit analysis).

Standard over-water and in-water construction and demolition BMPs would be implemented in accordance with environmental regulatory permit requirements and WSDOT specifications. Specific in-water construction time periods would also be established through the project permitting process to minimize potential effects of pile-driving and other in-water construction activities on salmonid species.

Appropriate BMPs and noise attenuation methods will be developed in coordination with the regulatory agencies, the Muckleshoot Indian Tribe, and environmental permitting processes, and implemented to minimize potential effects of pile-driving activities.

Other BMPs could include:

- Avoiding or minimizing any spillage of concrete or other construction material into the water

- Avoiding or minimizing direct lighting effects from entering Lake Washington from construction activities by adjusting the angle of the lights and/or using bulbs in a non-white light spectrum
- Operating construction equipment from work bridges and barges where possible to minimize ground disturbance when working in or near sensitive areas
- Restoring cleared areas to preconstruction grades and replanting the areas with appropriate native herbaceous and woody species after construction

Areas affected by construction of the SR 520, I-5 to Medina project would require mitigation. Through the NRTWG, WSDOT engaged regulatory agencies and the Muckleshoot Indian Tribe in developing appropriate mitigation for project construction effects.

The Conceptual Aquatic Mitigation Plan (Attachment 9 to this Final EIS) describes mitigation for aquatic resources effects. Temporary project effects that would likely require compensatory mitigation include partial shading and fill from the construction work bridges and falsework, which could increase predator use. These temporary effects would have the largest effect on juvenile Chinook as they migrate toward the Ship Canal in the shallow nearshore, where these work bridges are proposed to occur. Mitigation for these effects would occur at one or more of the mitigation sites identified in Section 5.11.

Additional mitigation measures include restoration of the areas affected by construction activities areas as follows:

- Replanting temporarily affected wetlands and riparian habitat with native vegetation after construction
- Planting native shade-tolerant vegetation in areas under the completed elevated roadway and ramps, where feasible and practical
- Mitigating wildlife habitat areas in accordance with the City of Seattle regulations and Washington Park Arboretum policies.

The Surface Water Discipline Report and Hazardous Materials Discipline Report also contain mitigation measures that will minimize and mitigate impacts to natural resources, primarily with respect to Best Management Practices that will be employed for protection of water quality and aquatic habitat during construction activities. See discussion above regarding implementation of Construction Stormwater Pollution Prevention Plan and Section 1.1.3 for further details on shoreline habitat and buffer mitigation.

### **1.5.2 Long-Term Impacts**

Several long-term or use-related impacts are anticipated as a result of approval of this proposal including impacts on recreation, visual quality, air quality, surface water quality, and plants and animals (ecosystems), and beneficial impacts to traffic and transportation.

The SR 520 Project would improve bicycle and pedestrian connections across the SR 520 corridor and the Montlake Cut by retaining and improving existing trails. The proposed second Montlake Bridge would include a new 18-foot wide bicycle/pedestrian pathway and connections to existing trails. A new bicycle/pedestrian trail would enter McCurdy Park under SR 520, creating new north/south connectivity and a loop trail with the Arboretum Waterfront Trail (see

Exhibit 5.4-3 in the Final EIS). The proposed regional bicycle/pedestrian path across SR 520 would provide a new connection between the City of Seattle's bicycle and pedestrian system and the Points Loop Trail in Medina. Bicyclists crossing SR 520 would have convenient access to the Burke-Gilman Trail and other portions of the regional recreational trail system.

Several adopted City codes and/or ordinances provide mitigation for some of the identified impacts. The Stormwater Code requires on-site collection of stormwater, with provisions for controlled tightline release to an approved outlet. The Environmental Critical Areas Ordinance provides protection for plants and animals and their habitat. Generally, compliance with these applicable codes and ordinances is adequate to achieve sufficient mitigation of most long-term impacts. However, due to the nature of the proposal, some of the potential impacts warrant further analysis.

### **1.5.2.1 Public Views**

#### ***1.5.2.1.1 Long Term Impacts***

Changes in visual quality are described in Chapter 5 of the Final EIS and in the Visual Quality Discipline Report Addendum and Errata included in Attachment 7 to the Final EIS.

Adding a second Montlake Bridge would change views primarily by enlarging the existing Montlake interchange. The character of the NOAA Northwest Fisheries Science Center would be changed by the addition of a ramp to the Bill Dawson Trail. This ramp would occupy a portion of the landscaped east slope and reshape the slope. There would be little effect on the visual quality of views from the NOAA campus toward SR 520 because no buildings would be removed from the NOAA facility and the three-story research buildings would continue to act as a physical barrier and visual buffer against the roadway.

In the MOHAI-East Montlake Park area, the east portal of the Montlake lid would be visible, which would reduce vividness, intactness, and unity for views toward SR 520. Vividness would remain high in the Montlake Cut area because the new bascule bridge would be designed as an appropriate architectural companion to the existing historic bridge. The new bascule bridge would not be noticeable from Rainier Vista, nor would it affect the Montlake Boulevard NE/Pacific Street NE intersection.

The City's SEPA Public View Protection Policy specifically addresses impacts on public views of significant natural and human-made features from identified public locations. These include public parks and viewpoints, scenic routes, and view corridors. For the project, the Bagley Viewpoint and McCurdy Park are identified. Delmar Dr. E, 10<sup>th</sup> Ave. E. and the existing SR520 Portage Bay Bridge are scenic routes in the vicinity of the project. No adverse impacts on public views from these locations are anticipated to occur as a result of the proposal; therefore, no mitigation is warranted. SEPA does not provide authority to mitigate impacts from private properties.

#### ***1.5.2.1.2 Proposed Mitigation: Public Views***

The following mitigation measures would be performed by WSDOT:

- Establish and follow design guidelines, developed in conjunction with the standards of both state and local jurisdictions, that include visual standards for the corridor. The

guidelines and standards would present ways to ensure visual unity and consistency throughout the SR 520 corridor. These include defining the appearance and style of built elements, such as lighting, railings, sign bridges, structures, and walls. The guidelines would also address the use of public art in the corridor, including the process for selection and location of any art in cooperation with municipal and county jurisdictions and art organizations.

- Revegetate areas where natural habitat, vegetation, or neighborhood tree screens were removed during construction. These areas would be under Portage Bay Bridge in Roanoke Park; along the roadway in the Eastside study area; and in the Montlake and West Approach Landscape Units, in particular at the NOAA Northwest Fisheries Science Center, East Montlake Park, and the Arboretum. The *Roadside Classification Plan* (WSDOT 2007) requires that areas within the right-of-way and construction easements be revegetated to align with the goals for the designated roadside classification. Mature vegetation would generally be used to revegetate parks and re-establish tree screens in these areas in consultation with local jurisdictions and agencies. Revegetation plans would also provide for adequate irrigation and monitoring until trees and plants are well established.
- Follow the guidelines of the *Roadside Classification Plan* to blend the project into the adjacent land uses, while creating a unified experience for the roadway user. Refer also to the Seattle Department of Transportation's Streetscape Design Guidelines in the *Seattle Right-of-Way Improvement Manual* (City of Seattle 2009).
- Establish landscaping that would be compatible with the character of the existing vegetation, especially along Lake Washington Boulevard, Montlake Boulevard, and through the Washington Park Arboretum, East Montlake Park, Ship Canal Waterside Trail, Arboretum Waterfront Trail, Montlake Playfield, and Interlaken Park/Delmar Drive East.
- Establish guidelines to ensure the design of structures are aesthetically compatible with the surrounding land and waterscapes in scale and architectural style, and unified in appearance.
- Redesign the remaining portion of East Montlake Park in cooperation with the Seattle Parks and Recreation Department. Grass and trees in the south Shelby-Hamlin area would be replaced with trees and screening vegetation to soften the appearance of the new lid wall. Mature and/or larger size trees, shrubs, vines, and groundcovers for replacement or enhancement would be selected as appropriate in consultation with Seattle Parks and Recreation. Plantings would be irrigated and monitored until established.

WSDOT will collaborate with the Seattle Design Commission (SDC), City of Seattle, UW Architectural Commission, Arboretum and Botanical Garden Committee (ABGC), Seattle Bicycle Advisory Board, Seattle Pedestrian Advisory Board, and Seattle neighborhoods to expand and refine an aesthetic vision, establish goals, and suggest design treatments for urban design and streetscapes within the project area. This collaboration will include identifying the existing urban amenities that will remain after construction of SR 520, and co-developing a

community engagement process for refining the goals and principles. It will ultimately result in a set of urban design guidelines to inform and direct final design and construction of SR 520.

The FEIS evaluated potential effects on the visual quality from many locations, including those identified in this section as having potential protection under Seattle's SEPA Public View Protection policy. No significant adverse impacts on views from the above-identified public viewpoints, parks, or scenic routes will result from the proposed action; no additional mitigation is warranted.

### **1.5.2.2 Air Quality**

#### ***1.5.2.2.1 Long Term Impacts***

Operational effects of the project on air quality is addressed in Chapter 5 of the Final EIS and, in particular, the Air Quality Discipline Report Addendum and Errata included in Attachment 7 to the Final EIS. Seattle's SEPA Air Quality Policy provides that air quality impacts associated with auto emissions are primarily mitigated by federal emissions controls, the state inspection/maintenance program, and public transportation improvements. The Puget Sound Clean Air Agency (PSCAA) is responsible for monitoring air quality in the Seattle area and oversees compliance with applicable standards.

#### ***1.5.2.2.2 Proposed Mitigation: Air Quality***

No additional mitigation pursuant to SEPA is warranted.

### **1.5.2.3 Surface Water Quality**

#### ***1.5.2.3.1 Long Term Impacts***

Operational effects of the project to surface water quality are analyzed and discussed in Chapter 5 of the Final EIS and in the Water Resources Discipline Report included in Attachment 7 to the Final EIS.

The additional Montlake Bridge would increase pollutant generating impervious surface (PGIS) areas because of the new bridge and widened streets that would connect with the bridge. The project includes different designs to convey the stormwater to treatment facilities, and the facilities will be located to meet those conveyance needs. The treatment facilities will be sized to meet the HRM requirements.

#### ***1.5.2.3.2 Proposed Mitigation: Surface Water Quality***

The Washington State Department of Ecology is the primary agency that regulates stormwater in the state. Ecology requires stormwater from all new pollutant-generating impervious surfaces, such as highways, to be treated before it is discharged. Ecology and WSDOT have agreed that runoff from highway projects will be treated using best management practices (BMPs) from the *Highway Runoff Manual (HRM)* (WSDOT 2008a) before discharged into Lake Washington.

No additional mitigation for operation-related impacts to surface water quality pursuant to SEPA is warranted.

#### **1.5.2.4 Plants and Animals**

##### ***1.5.2.4.1 Long Term Impacts***

Operational effects of the project on natural resources (i.e., fish, wildlife and vegetation) are analyzed and discussed in more detail in Chapter 5 of Final EIS and in the Ecosystems Discipline Report Addendum and Errata included in Attachment 7 to the Final EIS.

Impacts would occur to fish and wildlife and habitat from the additional shading created by adding a new structure across the Montlake Cut.

Nearshore habitats would also experience shading effects. Shading in these areas could affect fish and alter fish movement and distribution by reducing the growth of aquatic vegetation in shallower areas (WSDOT 2009c). This would alter the habitat conditions and potential fish use of these areas, including juvenile salmonids and their predators. Juvenile salmonids also tend to avoid or hesitate entering shaded areas such as under docks and bridges. In the West Approach area, the shadow of the bridge may delay, but not prohibit, outmigration of juvenile salmonids (Celedonia et al. 2008). Such delays could result in an increase in predation.

All anadromous salmonids (fish that migrate to the ocean) in the Lake Washington watershed travel under or adjacent to the Portage Bay and Evergreen Point bridges. The project has the potential to negatively affect individual fish in the Lake Washington watershed—including the ESA-listed populations of Chinook salmon, steelhead, and bull trout—by altering a portion of their rearing and migration habitat. However, the project is not expected to adversely affect overall salmonid populations or evolutionarily significant units in the watershed, as reported in the 2010 Biological Assessment (included in Attachment 18 to the Final EIS).

The Project would affect wildlife by permanently removing vegetation and wildlife habitat, increasing shading, and decreasing noise disturbance from increased highway operations. The new roadway would displace some high quality wildlife habitat, principally wetlands and forested uplands, in the corridor and thereby reduce cover, nesting, and foraging habitat for some wildlife species. However, the area is already highly fragmented by the existing roadway and surrounding development.

Vegetation would be removed from areas where new roadway would be on the ground (Table 5.11-6 in the Final EIS). Removing vegetation would reduce cover for urban-adapted species such as black-capped chickadees, American robins, and eastern gray squirrels. Habitat quality is generally low for the Urban Matrix cover type.

There would be no effects on any wildlife species protected under the ESA or state lists from the operation of the project, because none occur in these portions of the project. Operation of any of the options would have minimal effects on bald eagles, which are protected under the Bald and Golden Eagle Protection Act as described above.

##### ***1.5.2.4.2 Proposed Mitigation: Plants and Animals***

Chapter 5 and the Discipline Report also contain mitigation measures that will be employed to minimize and mitigate for potential impacts to these resources. The Water Resources Discipline Report and the Hazardous Materials Discipline Report, both included in Attachment 7 to the



Final EIS, also contain mitigation measures that will minimize and mitigate impacts to natural resources during operation of the proposed project.

Consistent with regulatory guidance, WSDOT has designed the project to avoid and minimize the effects of the Project. Specific aspects of the design that have been incorporated to avoid and minimize effects on ecosystems are as follows: As discussed in Section 5.10 of the Final EIS, stormwater treatment facilities would be constructed to treat roadway runoff before it is discharged to downstream aquatic habitat. This would improve water quality in the study area.

**Fish and Aquatic Resources.** In cooperation with resource agencies and the Muckleshoot Indian Tribe through the NRTWG, WSDOT has developed conceptual plans for habitat improvements, restoration, or construction to mitigate the effects of bridge construction, the increased width of shoreline and open-water crossings, and direct physical impacts from construction activities. To mitigate for unavoidable, permanent shoreline habitat (aquatic) impacts, WSDOT used the conceptual model and assessment methodology. Unfortunately, these impacts cannot be mitigated for on-site because of project constraints. Based on these methods, the Montlake Bridge project would result in permanent impacts to 0.18 acre (Table 4 of the November 2011 *Montlake Bridge Environmental Critical Areas Technical Memorandum*). Because WSDOT cannot mitigate for these impacts on-site, WSDOT sought off-site mitigation. During the off-site selection process, WSDOT has identified the Elliott Reach of the Cedar River as sufficient to provide the required mitigation area for the project. Mitigation at these sites can address the same functions and values that would be affected by the project. The Cedar River site provides a total of 1.14 acres of mitigation credit from floodplain and riparian restoration. The West Approach project (WSDOT 2011d) will use a portion of this credit; however, a surplus of 1.12 acres will be left to apply to offset impacts from the Montlake Bascule Bridge project. Of this total available mitigation area, 0.18 acre will be assigned to offset permanent shoreline habitat (aquatic) impacts (Table 3). The proposed mitigation sites will be monitored for 5 to 10 years, depending on the mitigation actions (WSDOT 2010). Revegetated temporary impact areas will be monitored for 5 years. Specific mitigation actions would support spawning, rearing, or migrating salmonids and are proposed to include the following:

Floodplain acquisition, levee setbacks, and off-channel habitat creation in a reach of the lower Cedar River (Cedar River/Elliott Bridge Reach) would improve channel, riparian, and floodplain functions, benefitting spawning, rearing, and migratory habitat for multiple species of salmonids.

**Wildlife and Habitat.** WSDOT has coordinated with the City of Seattle, the University of Washington, Seattle Parks and Recreation, and the Arboretum Foundation in developing a planting strategy to offset the project's effects on regulated shoreline habitat under the City's shoreline management regulations. Many shoreline areas of Union Bay and the Montlake Playfield are not fully vegetated and/or contain invasive species. Some of these areas could be replanted with native trees and shrubs and the invasive species removed.

#### **1.5.2.5 Other Impacts**

Several adopted Codes and Ordinances and other Agencies will appropriately mitigate the other use-related adverse impacts created by the proposal, such as the Puget Sound Clean Air Agency and the Seattle Energy Code (long-term energy consumption).

### **1.5.3 Conclusion - SEPA**

As part of the project proposal WSDOT has included substantial mitigation for identified impacts. A summary of these mitigation measures is in the project file, including the Montlake Bridge Environmental Critical Area Technical Memorandum (ECAR, Nov. 2011), as well as in the shoreline and SEPA analysis in this decision.

In addition to the aquatic/shoreline mitigation measures detailed in the ECAR and described in Section 1.1.3, WSDOT proposes the following mitigation measures as part of their proposal for this permit application:

- Community Construction Management Plan
- Neighborhood Transportation Management Plan
- Tree and Vegetation Management and Protection Plan
- Seattle Community Design Process (as applicable)

DPD's analysis of the application is based on the proposal together with these mitigation measures and views this mitigation as appropriate pursuant to the City's SEPA policies. If the applicant proposes substantive revisions at a future date, additional SEPA review may be required.

### **1.5.4 Decision - SEPA**

The proposal is **CONDITIONALLY GRANTED**

## **1.6 SHORELINE AND SEPA CONDITIONS**

1. The project must be designed and built in substantial conformance to the site plan and project specifications submitted to the City of Seattle with the Application for Shoreline Substantial Development Permit, including the mitigation measures described in Section 1.1.3 above. Additional mitigation measures for habitat impacts described in this analysis and in the following conditions are required.
2. The time limits for the permit, per SMC 23.60.074A and B will be determined prior to issuance and be based on the time needed to complete the construction of the project (about 2.5 years).

### **Prior to Issuance of Master Use Permit**

#### **3. Final Design**

WSDOT or its contractor shall provide revised plan sheets showing final design for all development approved for the second Montlake Bridge (3012586). Any changes to current plan sheets for the Montlake Bridge shall be clearly identified on these revised plans, including any revisions that change the impacts of the project to aquatic/shoreline habitat and shoreline habitat buffers in the project area.

#### **4. Environmental Critical Area Technical Memorandum**

A revised Environmental Critical Area Technical Memorandum or addendum to the report shall be provided to DPD that clearly updates, as needed, all information in this report relevant to the environmental impacts and/or mitigation based on the final design for the Montlake Bridge.

## **5. Additional Plan Submittals**

In addition to the information described above, WSDOT or its contractor shall prepare and provide copies to DPD of the following plans in the conditions below and referenced on all permit submittals. These plans, except the Neighborhood Traffic Management Plan and the Seattle Community Design Process plan, shall be maintained in both the contractor's construction office and any on-site construction offices.

More information on these plans is contained or referenced in the application submittal materials for this project to DPD, including the Montlake Bridge ECAR, the FEIS (e.g., Chapter 6) and the relevant Discipline Reports for the EIS, as well as WSDOT's Highway Runoff Manual (HRM). These plans shall also include all project-specific Best Management Practices that go beyond standard BMPs described in the HRM and are necessary due to the nature of this project and its location. These project-specific BMPs are summarized in the application material for this project (e.g., Sections 6.0 and 7.0 of the Shoreline Application project description and supplemental information, dated November 29, 2011) as well as the shoreline and SEPA analysis above.

## **6. The Community Construction Management Plan**

WSDOT and the City of Seattle have entered into a Memorandum of Understanding (MOU), signed Nov. 17, 2011, to address many aspect of the construction and operation of the expanded SR520 facilities. The MOU identifies numerous WSDOT commitments for public involvement and mitigation actions. A significant component of the MOU is the Community Construction Management (CCMP). The CCMP will be developed with public input for each future construction phase of the 520 Bridge Replacement Project in Seattle that receives funding, including the Montlake Bridge section (Master Use Permit No. 3012586).

Key topics that will be addressed in the CCMP for 3012586:

- a. Noise
- b. Vibration. Note: This section of the CCMP should include details regarding how WSDOT will conduct outreach to potentially affected property owners in the project area and provide pre-construction surveys of residences or other privately-owned structures to establish baseline for potential impacts due to vibration during construction. This section shall include details for how claims of damage clearly caused by construction will be resolved.
- c. Air quality and fugitive dust
- d. Visual quality: aesthetics, glare, lighting
- e. Traffic and transportation (haul routes, traffic, detours, street parking, damage resulting from heavy trucks and hauling, access, including emergency service access)
- f. Utilities and services
- g. Vegetation management and erosion control
- h. In-water work (construction barges, work bridges, pontoon moorage, pontoon towing, and boat navigation)

Final work products that will be developed and implemented as part of the CCMP process will include the CCMP, Neighborhood Traffic Management Plan, Tree and Vegetation Management and Protection Plan, and the Seattle Community Design Process (as applicable).

## **7. Neighborhood Traffic Management Plan**

WSDOT and the Seattle Department of Transportation will collaborate to develop the Neighborhood Traffic Management Plan. The purpose of the plan will be to catalog and develop solutions for community traffic concerns in the corridor and surrounding neighborhoods and to identify potential funding sources for projects consistent with the recommendations and findings of the ESSB 6392 Final Workgroup Technical Report.

## **8. Tree and Vegetation Management and Protection Plan**

As part of the Community Construction Management Plan process, and as agreed to in the signed MOA between the State and the City of Seattle, WSDOT will develop a Tree and Vegetation Management and Protection Plan (TVMPP). The final TVMPP will be developed and implemented prior to construction. The plan will be developed in collaboration with the City, neighborhoods, and organized groups, such as the ABGC, and will address areas of the corridor where specific trees and or vegetation are to be removed or disturbed as part of the construction or resulting project improvements.

The plan will identify areas of mature tree removal, protection, potential relocation, and restoration of project areas including areas temporarily dedicated to construction, including staging and lay down areas. The goal of the plan is to minimize affects to trees where feasible. WSDOT will ensure that contractors adhere to the plan, notify neighborhoods prior to impacts, and that tree and vegetation removal would only occur at the approximate time required for construction. A DPD planner or designated representative shall be a participant in this process.

## **9. Seattle Community Design Process**

The Seattle Community Design Process (SCDP) fulfills a recommendation made by the 2010 ESSB 6392 Workgroup to “expand and refine an aesthetic vision, establish goals, and suggest design treatments for urban design and streetscapes within the project area.”

This collaboration would include identifying the existing urban amenities that will remain after construction of SR 520, and co-developing a community engagement process for refining the goals and principles. It would ultimately result in a set of urban design guidelines that would inform and direct final design and construction of SR 520.” (Urban Design and Streetscape Technical White Paper)

In consultation with the Seattle Design Commission and the Seattle Landmarks Preservation Board, WSDOT will develop a design-review process, which may or may not be part of the SCDP, for the new bascule bridge that will ensure context-sensitive design and consistency with the Secretary of the Interior’s Standards for the Treatment of Historic Properties, per the SR520, I-5 Medina Bridge Replacement and HOV Project Section 106 Programmatic Agreement dated May 2, 2011.

At the conclusion of the SCDP, WSDOT will develop a progress report that will include the results of the feedback collected from an Expert Review Panel, an agency and community design group and the broader public. This feedback will guide WSDOT as we continue to refine the urban and sustainable design elements of the preferred alternative.

### **Prior to the Start of Construction**

10. The following plans shall be fully prepared and provided to DPD prior to the start of any construction activities for this project:

#### **a. Stormwater Pollution Prevention Plan (SWPPP)**

The SWPPP for this project shall be completed and provided to DPD prior to any construction activities on this project. This plan is intended to address water quality concerns from stormwater and other project related process water. The Temporary Erosion and Sediment Control (TESC) Plan and the Spill Prevention, Control, and Countermeasures (SPCC) Plan will implement the requirements of the SWPPP.

#### **b. Temporary Erosion and Sediment Control Plan (TESCP)**

The TESCP shall outline the design and construction specifications for BMPs to be used to identify, reduce, eliminate, or prevent sediment and erosion problems. It would include environmental standards based on state regulations, such as turbidity and total suspended solids (TSS) levels in stormwater discharged from construction staging and work areas. This Plan will address the following elements:

- 1) Marking clearing limits
- 2) Establishing construction access
- 3) Controlling flow rates
- 4) Installing sediment controls
- 5) Stabilizing soils
- 6) Protecting slopes
- 7) Protecting drain inlets
- 8) Stabilizing channels and outlets
- 9) Controlling pollutants
- 10) Controlling dewatering
- 11) Maintaining BMPs
- 12) Managing the project

#### **c. Spill Prevention, Control and Countermeasures Plan**

The Spill Prevention, Control and Countermeasures Plan shall outline requirements for spill prevention, responsible personnel, spill reporting processes and forms, site information including site plans inspection protocols, equipment, material containment measures, and spill response procedures.

**d. Concrete Containment and Disposal Plan**

The Concrete Containment and Disposal Plan shall outline the management, containment, and disposal of concrete and discuss BMPs that would be used to prevent the discharge of stormwater or other materials with an elevated pH. Any collected wastes with an elevated pH will be treated prior to discharge to surface or groundwater or will be discharged to a sanitary sewer or similar system in the compliance with regulatory approvals.

**e. Water Quality Monitoring Plan**

The contents of the Water Quality Monitoring Plan are described in the HRM and include monitoring or sampling locations, procedures, reporting and identification of the applicable water quality standards from regulations or project approvals.

**f. Fugitive Dust Control Plan**

The Fugitive Dust Control Plan shall outline measures to prevent generation of fugitive dust from exposed soil, construction traffic, and material stockpiles. This plan will be prepared to address air quality in compliance with a Memorandum of Agreement between WSDOT and the Puget Sound Clean Air Agency.

**g. Geotechnical Issues and Impact to Private Property**

Plans shall be submitted to DPD that clearly demonstrate, at least conceptually, that all aspects of the development including temporary structures and earthwork activities needed to construct the proposed development will be confined to the public right-of-way. Building permits may be required if temporary or permanent encroachments on or beneath adjacent private property are needed to construct the development.

11. WSDOT and/or its contractor shall obtain all required permits and approvals from other local, state and federal authorities, including King County, Washington Department of Fish and Wildlife, Washington Department of Natural Resources, Washington Department of Ecology, U.S. Army Corps of Engineers, Puget Sound Clean Air Agency, OSHA, and any others that apply to this project.

**During Construction**

12. The contractor and WSDOT shall be responsible for compliance with each of the plans described above, including all components of the CCMP and all construction-related Best Management Practices summarized in the FEIS and associated Discipline Reports and submittal materials for the application for this project, including the Environmental Critical Area Technical Memorandum for Portage Bay Area.
13. The contractor and WSDOT shall be responsible for compliance with the City of Seattle Noise Regulations or the modified requirements listed in any approved Noise Variances.
14. The contractor and WSDOT shall be responsible for implementing fish and wildlife protection and enhancement recommendations made by Washington Department of Fish and

Wildlife to WSDOT through the HPA process and consultation with WDFW's wildlife experts.

15. WSDOT or its contractor shall make available to DPD, upon request, the results of all monitoring reports produced during construction that relate to potential construction-related impacts such as water quality monitoring, sediment quality monitoring, spill activity, fish or wildlife disturbances, etc.

**Within Six Months of Completion of Habitat Mitigation and Revegetation Efforts.**

16. WSDOT or its contractor shall supply provide DPD with as-built plans showing all development, including landscape planting, completed at the aquatic and shoreline mitigation sites for the project proposed for this project, including on-site revegetation actions.

**For Life of the Project**

17. All operational Best Management Practices identified in the 2011 FEIS for this project and associated Discipline Reports and the Montlake Bridge ECAR shall be implemented and enforced.
18. WSDOT or its contractor shall provide DPD copies of monitoring reports associated with performance of aquatic and shoreline habitat mitigation projects.

Signature: \_\_\_\_\_ (signature on file) Date: January 17, 2012  
Ben Perkowski, Senior Land Use Planner  
Department of Planning and Development